

LITIGATION TECHNICAL SUPPORT AND SERVICES

ROCKY MOUNTAIN ARSENAL

DRAFT FINAL
PHASE I
CONTAMINATION ASSESSMENT REPORT
SITE 1-7
HYDRAZINE BLENDING AND STORAGE FACILITY
Version 2.1

April 1987
Contract No. DAAK11-84-D-0017
TASK NO. 11 - HBSF

FILE COPY

Rocky Mountain Arsenal
Information Center
Commerce City, Colorado

Prepared by:

EBASCO SERVICES INCORPORATED
R.L. STOLLAR AND ASSOCIATES
CALIFORNIA ANALYTICAL LABORATORIES, INC.
UBIL INC. TECHNOS INC. GERAGHY & MILLER, INC.

Prepared for:

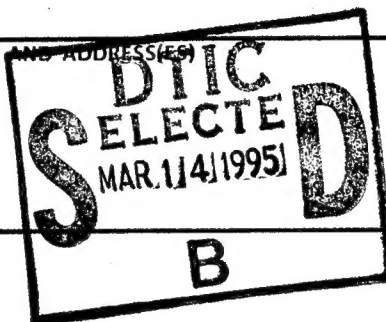
U.S. ARMY PROGRAM MANAGER'S OFFICE FOR
ROCKY MOUNTAIN ARSENAL CONTAMINATION CLEANUP

THE VIEWS, OPINIONS AND/OR FINDINGS CONTAINED IN THIS REPORT ARE THOSE OF THE AUTHOR(S) AND SHOULD NOT BE CONSTRUED AS AN OFFICIAL DEPARTMENT OF THE ARMY POSITION, POLICY, OR DECISION, UNLESS SO DESIGNATED BY OTHER DOCUMENTATION.

THE USE OF TRADE NAMES IN THIS REPORT DOES NOT CONSTITUTE AN OFFICIAL ENDORSEMENT OR APPROVAL OF THE USE OF SUCH COMMERCIAL PRODUCTS. THE REPORT MAY NOT BE CITED FOR PURPOSES OF ADVERTISEMENT.

19950309 073

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 04/00/87		3. REPORT TYPE AND DATES COVERED
4. TITLE AND SUBTITLE CONTAMINATION ASSESSMENT REPORT, PHASE I, SITE 1-7, HYDRAZINE BLENDING AND STORAGE FACILITY, TASK 11, DRAFT FINAL, VERSION 2.1			5. FUNDING NUMBERS DAAK11 84 D 0017	
6. AUTHOR(S)				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) EBASCO SERVICES, INC. LAKEWOOD, CO			8. PERFORMING ORGANIZATION REPORT NUMBER 87097R12	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) ROCKY MOUNTAIN ARSENAL (CO.). PMRMA COMMERCE CITY, CO			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) <p>THIS DRAFT FINAL REPORT DOCUMENTS THE PHASE I CONTAMINATION SURVEY OF SITE 1-7, THE HYDRAZINE BLENDING AND STORAGE FACILITY CONSTRUCTED IN 1961 FOR THE AIR FORCE. 54 SAMPLES FROM 15 BORINGS WERE ANALYZED FOR VOLATILE AND SEMIVOLATILE ORGANICS AND METALS WITH SEPARATE ANALYSES FOR AS, HG, DBCP, HYDRAZINES, AND NITROSAMINES. MIBK, DLDRN, PB, AS, AND ZN WERE DETECTED ABOVE THEIR RESPECTIVE INDICATOR RANGES.</p> <p>A PHASE II PROGRAM CONSISTING OF 21 ADDITIONAL BORINGS IS RECOMMENDED. THE VOLUME OF POTENTIALLY CONTAMINATED SOIL PRESENT IS ESTIMATED AT 65,400 CUBIC YARDS.</p> <p>APPENDICES: CHEMICAL NAMES, PHASE I CHEMICAL DATA.</p>				
14. SUBJECT TERMS GEOLOGY, HYDROLOGY, SOIL SAMPLING, ANALYTES, CHEMICAL DATA, HISTORICAL WATER DATA			15. NUMBER OF PAGES	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT UNCLASSIFIED		18. SECURITY CLASSIFICATION OF THIS PAGE		19. SECURITY CLASSIFICATION OF ABSTRACT
20. LIMITATION OF ABSTRACT				



DTIC QUALITY INSPECTED 4

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
<u>EXECUTIVE SUMMARY</u>	
1.0 <u>PHYSICAL SETTING</u>	1
1.1 <u>LOCATION</u>	1
1.2 <u>GEOLOGY</u>	1
1.3 <u>HYDROLOGY</u>	3
2.0 <u>HISTORY</u>	11
3.0 <u>SITE INVESTIGATION</u>	15
3.1 <u>PREVIOUS SOIL INVESTIGATIONS</u>	15
3.2 <u>PHASE I SURVEY</u>	16
3.2.1 <u>Phase I Program</u>	16
3.2.2 <u>Phase I Field Observations</u>	17
3.2.3 <u>Geophysical Exploration</u>	19
3.2.4 <u>Phase I Analyte Levels and Distribution</u>	19
3.2.5 <u>Phase I Contamination Assessment</u>	34
3.3 <u>PHASE II SURVEY</u>	43
3.4 <u>QUANTITY OF POTENTIALLY CONTAMINATED SOIL</u>	44
4.0 <u>REFERENCES CITED</u>	47

Appendix 1-7-A - Chemical Names and Abbreviations

Appendix 1-7-B - Phase I Chemical Data

Appendix 1-7-C - Historical Water Quality Data

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution	
Availability Codes	
Dist	Avail and/or Special
A-1	

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1-7-1 Location Map, Task 11 Borehole and Well Locations.	2
1-7-2a Lithologic Log of Boring 11.	4
1-7-2b Lithologic Log of Boring 14.	5
1-7-3 Topography and Surface Drainage.	6
1-7-4 Water Level Elevations (measured on 5-14-86)	9
1-7-5 Schematic Layout	10
1-7-6 Analytes Detected Within or Above Indicator Levels in Soil Samples.	33
1-7-7 Proposed Phase II Borings and Sampling Plan.	45

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1-7-1 Water Level Measurements.	8
1-7-2 Analysis of Data on Chemical Constituents Detected in Soils During Phase I Field Study.	20
1-7-3 Results of Phase I Field Study, Soil Samples.	21
1-7-4 Tentative Identification of Nontarget Compounds Detected in Soils	35

EXECUTIVE SUMMARY

SITE 1-7

HYDRAZINE BLENDING AND STORAGE FACILITY

Site 1-7, the hydrazine blending and storage facility, is located in the northern half of the northeastern quarter of Section 1 on the Rocky Mountain Arsenal. The site was constructed in 1961 on the western end of a large open storage area, which had been in operation since 1948 to store and blend hydrazine fuels. This site was investigated under Task 11 in the spring of 1986. A total of 15 borings, yielding 54 samples, were drilled to depths ranging from 5 to 40 feet.

Methylisobutyl ketone, dieldrin, lead, arsenic, and zinc were detected above their indicator ranges in the soil samples. Methylisobutyl ketone could have been introduced into the soil sample during sample preparation or during analysis.

The Phase I field program indicates that additional field investigations are warranted. A Phase II program is recommended to investigate the dieldrin contamination observed in the Phase I program. The Phase II program will involve the completion of 21 additional borings, producing 60 soil samples.

As a result of the Phase I program, the volume of potentially contaminated soil is revised downward from 77,000 cubic yards to 65,400 cubic yards.

PHASE I CONTAMINATION ASSESSMENT REPORT

SITE 1-7

HYDRAZINE BLENDING AND STORAGE FACILITY

1.0 PHYSICAL SETTING

1.1 LOCATION

Site 1-7, the hydrazine blending and storage facility (HBSF), is located in the northern half of the northeastern quarter of Section 1, east of the South Plants manufacturing complex on the Rocky Mountain Arsenal (RMA) (Figure 1-7-1). The HBSF consists of two discrete yards, each surrounded by a chain link security fence and a barbed-wire fence. Although physically separated, the yards are connected by two overhead pipelines. The west yard encompasses 346,000 square feet (ft²), and the east yard, located 500 feet (ft) to the east, encompasses 103,000 ft². The site is at an elevation of 5250 ft above mean sea level (msl) and has a local relief of 15 ft. The west yard contains the loading and unloading facilities for rail cars and tank trucks, the blending facilities, a 44,000 gallon capacity in-ground concrete tank for the collection of waste water and area runoff, a drum filling station and a drum storage pad, storage and tool sheds, and the bulk storage tanks. The east yard was constructed as an additional storage facility for unsymmetrical dimethyl hydrazine, but is currently used to store waste water from previous HBSF operations and precipitation runoff from the HBSF. Site 1-7 was investigated under Task 11 in the spring of 1986. Figure 1-7-1 shows the layout of Site 1-7.

1.2 GEOLOGY

The HBSF is located on the eastern end of a bedrock (Denver Formation) high that has a relatively thin, unsaturated Pleistocene alluvial cover. Although there were no recorded borings drilled within the east or west yards prior to this study, the alluvium and the Upper Denver were previously investigated in the immediately surrounding area. Prior to drilling, the alluvial thickness was estimated to vary from 10 to 20 ft across the site. This was confirmed during drilling, when alluvial thicknesses ranging from 6.5 to 17 ft were found. Figure 1-7-1 indicates the location of the boreholes drilled during this study. The alluvium has been described as silt and clayey sand (May, 1982/RIC 82295R01) and

silty sand (Broughton, Miller, & Mitchell, 1979/RIC 81266R27), that is consistent with local lithologic conditions as identified in the lithologic logs of the soil borings drilled during this study.

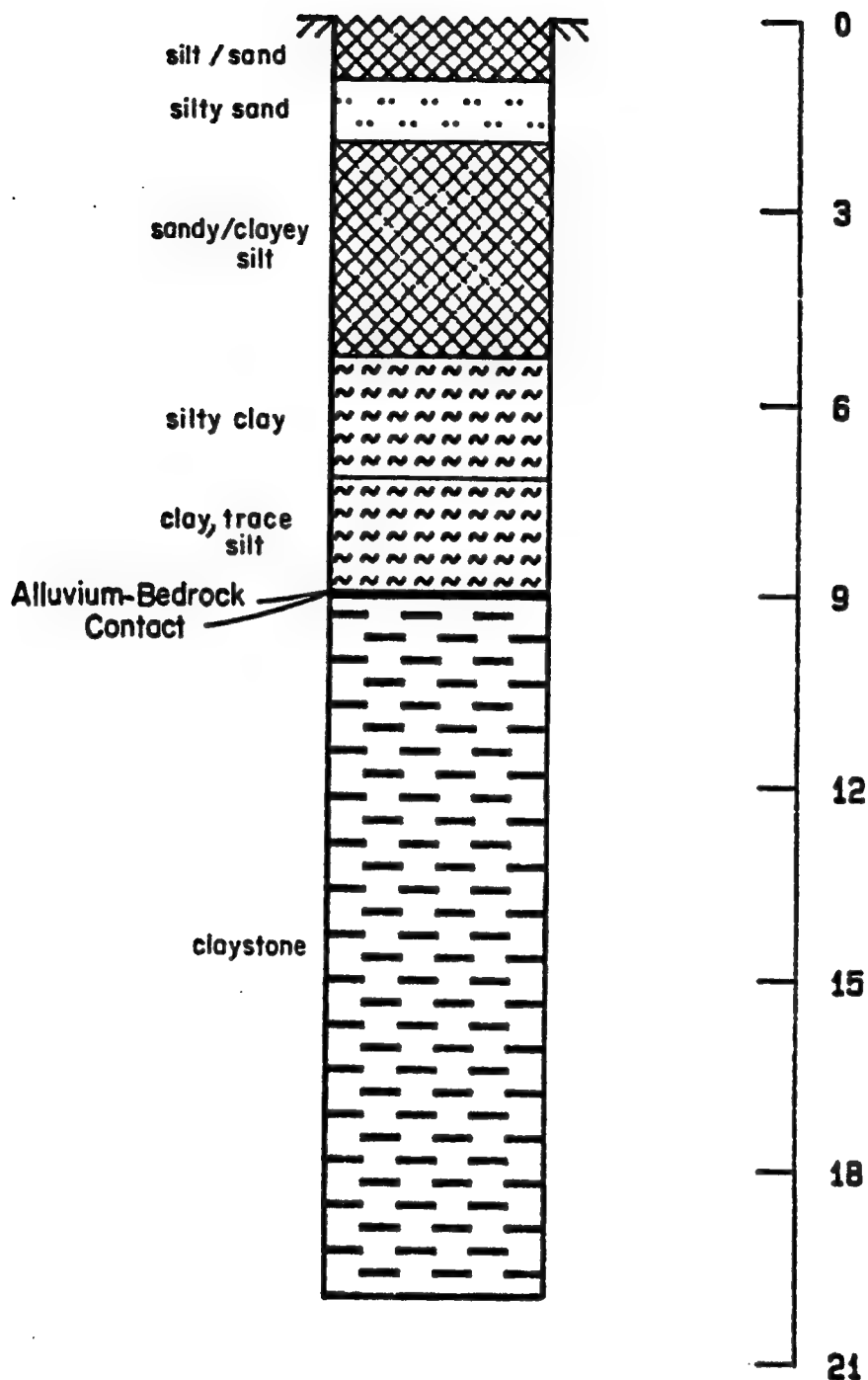
Representative soil boring profiles from the two deepest borings are shown in Figures 1-7-2a and 1-7-2b. Descriptions of the geologic materials found at various depths during the Phase I program are presented in Table 1-7-3 in Section 3.2.4 of this report.

The drilling program also confirmed that, locally, the Upper Denver consists of interbedded claystone, silty claystone, and lignite, as previously reported in May (1982/RIC 82295R01). The Upper Denver was found to be highly fractured at some locations. An Upper Denver conglomerate, consisting of claystone pebbles in a silty sand matrix, was encountered at the site of Boring 1 (located northwest of the west yard in a ditch, Figure 1-7-1).

1.3 HYDROLOGY

The HBSF straddles two surface drainages. Topographic maps, confirmed through field reconnaissance, indicate the ditch on the north side of the west yard drains eastward from the South Plants manufacturing area to the common corner of Sections 31, 36, 1, and 6, and then north to the First Creek drainage basin in Section 31 (Figure 1-7-3). The south drainage ditch that begins at the southwestern corner of the west yard enters an easterly flowing ditch that drains to First Creek in Section 6. The two ditches northwest of the northwestern corner of the west yard flow northward into Section 36 (Figure 1-7-3).

Spaine and Gregg made a study of the surface water quality of the South Plants area in 1983, sampling storm water runoff collected from outfall pipes. Their report also included a July 1980 report from Shell to the Colorado Department of Health that detailed the runoff water quality (Spaine & Gregg, 1983). While the watersheds examined in Spaine and Gregg do not include the two ditches previously mentioned, the storm-water runoff from the northern portions of the South Plants area contained traces of several target compounds, including diisopropylmethylphosphonate, sulfoxide, aldrin, isodrin, dieldrin, endrin, chloroform, carbon tetrachloride, benzene, and chloride.

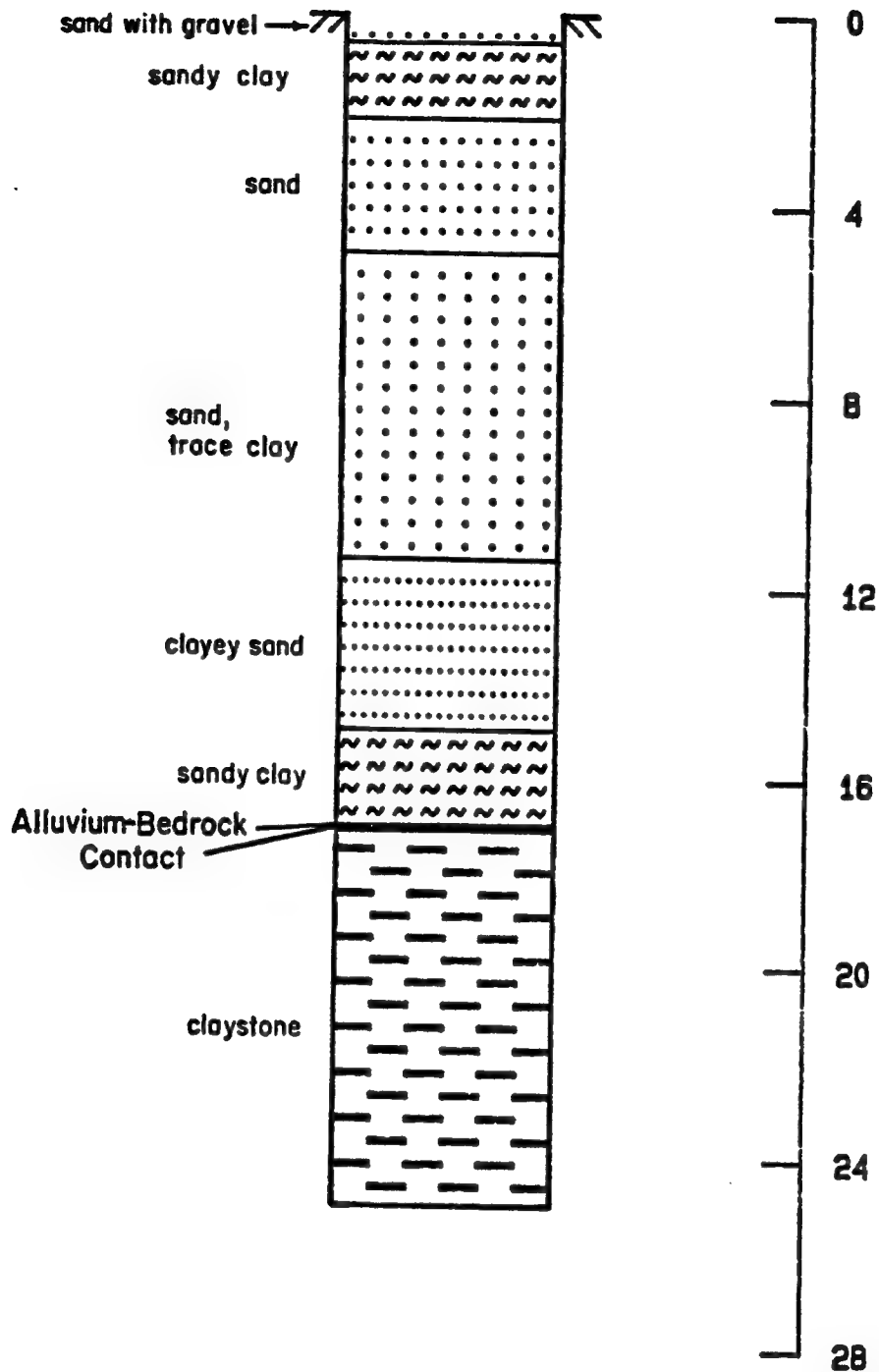


SCALE: 1 IN= 3 FT

Prepared For:
 Program Manager's Office for
 Rocky Mountain Arsenal Cleanup
 Aberdeen Proving Ground, Maryland

Figure 1-7-2a

LITHOLOGIC LOG OF BORING II
 SITE 1-7
 Rocky Mountain Arsenal, Task 11
 Prepared by: Geraghty & Miller, Inc.
 for Ebasco Services, Inc.



SCALE: 1 IN= 4 FT

Prepared For:

Program Manager's Office for
Rocky Mountain Arsenal Cleanup
Aberdeen Proving Ground, Maryland

Figure 1-7-2b

LITHOLOGIC LOG OF BORING 14

SITE 1-7

Rocky Mountain Arsenal, Task 11
Prepared by: Geraghty & Miller, Inc.
for Ebasco Services, Inc.

The HBSF is on the eastern end of the South Plants groundwater mound (May et al., 1983/RIC 83299R01; RMACCPMT, 1983/RIC 83326R01). The 1983 report on the Selection of a Contamination Control Strategy for RMA describes the primary groundwater flow components at RMA (RMACCPMT, 1983/RIC 83326R01). Groundwater flow under the HBSF is reported to be generally north and northeastward toward First Creek (May et al., 1983/RIC 83299R01; Stollar & van der Leeden, 1981/RIC 81293R05; Romero & Ward, 1981/RIC 81293M01; van der Leeden, 1981/RIC 82091R02; Kolmer, 1975/RIC 81266R34; Broughton, Miller & Mitchell, 1979/RIC 81266R27; and May, 1982/RIC 82295R01). At First Creek, flow is directed northward in an alluvium-filled channel underlying First Creek (RMACCPMT, 1983/RIC 83326R01). The alluvium is described as having moderate hydraulic conductivity (Stollar & van der Leeden, 1981/RIC 81293R05). The Denver Formation bedrock is indicated to be of low hydraulic conductivity (Stollar & van der Leeden, 1981/RIC 81293R05). Actual values for low and moderate hydraulic conductivity were not defined in the references, but hydraulic conductivities ranging from 10^{-2} to 10^{-4} centimeters per second (cm/sec) are considered moderate, and hydraulic conductivities ranging from 10^{-4} to 10^{-7} cm/sec are considered low.

Water levels were measured in 13 wells located in and around the HBSF on two occasions (February 28, 1986, and May 14, 1986) during the associated Site 1-7 groundwater investigation (Table 1-7-1). These data indicate that groundwater is flowing under the HBSF to the northeast and east. The bulge in the water table contours indicated on Figure 1-7-4 may be the result of an area of high infiltration capacity, or a water source beneath the west yard. The presence of a sand channel in this area is unconfirmed by the soil boring logs. A possible water source beneath the west yard is the sewer system (Figure 1-7-5). However, historical water quality analyses do not indicate the presence of a contaminant source in this area. This effect may also have been artificially created by the difference in construction techniques used in monitoring wells 01051 through 01056 from those used in the remaining monitoring wells. Continued water level measurements in this area are needed to confirm any of the above mentioned possibilities. Water level contours for the most recent measurements are shown on Figure 1-7-4. Measured groundwater elevations ranged from 5250 ft msl in the southwest corner of the study area to 5239 ft msl in the northeast corner (on May 14, 1986).

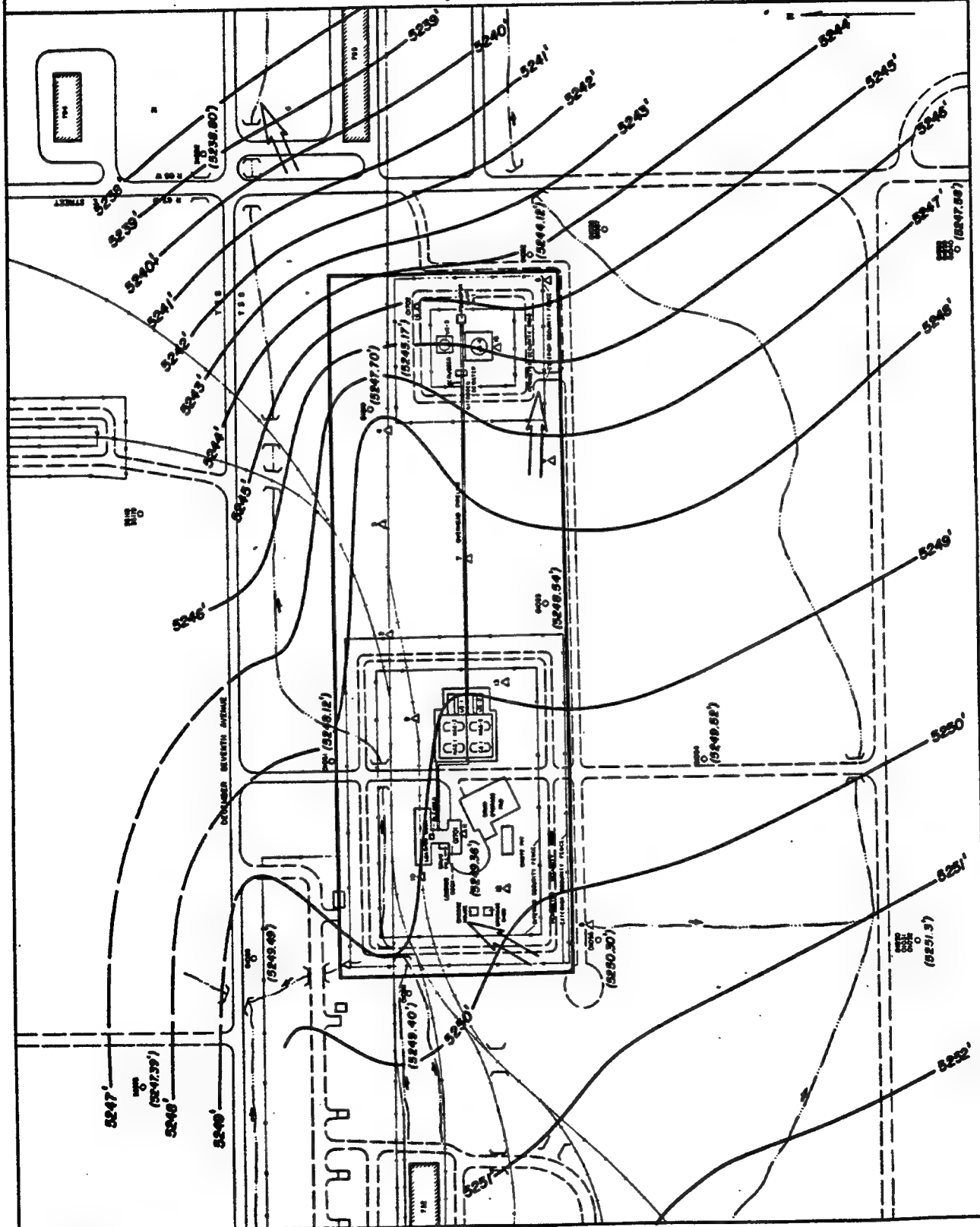
Table 1-7-1. Water Level Measurements.

Well #	Measuring Point Elevation ¹ (ft msl) ²	<u>28 February 1985</u>		<u>14 May 1986</u>	
		Depth to Water (feet)	Water Elevation (ft msl) ²	Depth to Water (feet)	Water Elevation (ft msl) ²
01008	5,262.78	15.65	5,247.13	13.29	5,249.49
01019	5,265.79	21.21	5,244.58	18.09	5,247.70
01036	5,259.83	16.79	5,243.04	15.28	5,244.55
01051	5,263.70	18.33	5,245.37	15.58	5,248.12
01052	5,261.48	18.85	5,242.63	23.51	5,244.12
01053	5,266.03	20.11	5,245.98	17.55	5,248.54
01054	5,265.60	17.28	5,248.32	16.08	5,249.52
01055	5,267.15	18.83	5,248.16	16.85	5,250.30
01056	5,265.50	18.51	5,246.99	16.10	5,249.40
01701	5,264.00	— ³	— ³	14.87	5,249.36
01702	5,262.04	— ³	— ³	16.87	5,245.17
31002	5,254.24	17.7	5,236.54	15.44	5,238.80
36075	5,256.33	9.97	5,246.36	8.94	5,247.39

¹ The measuring point for each well is the top of the well casing

² Elevations are in feet above mean sea level

³ Well not installed at the time of the measuring round



Historic groundwater quality data are available for 9 monitoring wells in the vicinity of the HBSF. These data are presented in the associated Site 1-7 groundwater investigation report as Appendix C. These data show that carbon tetrachloride, chloroform, 1,1,1-trichloroethylene, 1,1,2-trichloroethylene, aldrin, dieldrin, endrin, isodrin, dichlorodiphenylethane, dichlorodiphenyl trichloroethane, trichloroethylene, 1,2-dibromo-3-chloropropane, and 1,1-dichloroethylene were detected at measurable levels in the groundwater in the vicinity of the HBSF.

These compounds are typical of those found in the groundwater beneath the South Plants manufacturing complex. Thus the presence of these compounds in groundwater beneath the HBSF does not imply that the HBSF is contributing these chemicals to the groundwater.

2.0 HISTORY

The HBSF is owned by the U.S. Air Force and was operated by RMA between 1962 and May 5, 1982 (Strang, 1982). The HBSF west yard was constructed in 1961 by RMA in conjunction with the U.S. Air Force (PMCDIR, 1977/RIC 81266R68). It was built on the western end of a large open storage area that had been in operation since at least 1948 (Stout & Abbott, 1982/RIC 83368R01). The types of materials stored in this yard are unknown.

Construction drawings (Barbieri & Strang, 1961) indicate that the six storage tanks (two of carbon steel for storage of unsymmetrical dimethyl hydrazine and four of double wall stainless steel, wrapped and heated by the circulation of an ethylene glycol-based fluid for the storage of hydrazine), the rail car and truck loading and unloading facilities and the associated blending area, the change house, the storage shed, and the in-ground concrete tank currently present at the site were built in 1961. The six tanks in the west yard are on concrete pads and are surrounded with concrete retaining walls, as are the two tanks in the east yard. The drum storage concrete pad, the drum cleaning shed, and the asphalt truck loading area were probably built later, as these facilities are not visible on the aerial photographs taken in 1966 and 1970; however, these areas are clearly visible in the 1980 aerial photographs included in Stout and Abbott

(1982/RIC 83368R01). The east yard was constructed in 1976 and was originally designed for use as a storage area for unsymmetrical dimethyl hydrazine. Since 1982 the two storage tanks in this area have been used only for wastewater storage from HBSF operations and precipitation runoff. Figure 1-7-5 is a schematic layout of the HBSF (Barbieri & Strang, 1961; Stout & Abbott, 1982/RIC 83368R01; Dept. of Army, 1975). The fuel handling facilities contain a water-flood type fire protection system and a circulating ethylene glycol-based heating system to protect the stored fuel from freezing.

Operations at the HBSF consisted of loading and unloading rail cars and tank trucks; the storage of anhydrous hydrazine, unsymmetrical dimethyl hydrazine, and Aerozine 50 (50% anhydrous hydrazine and 50% unsymmetrical dimethyl hydrazine); the blending of fuels; and, occasionally, the destruction of off-spec batches of Aerozine 50. Blending operations were not continuous and occurred in response to requests by the U.S. Air Force. The facility was also used to store other hydrazine fuels such as monomethyl hydrazine, monopropellant hydrazine, and hydrazine 70 (a hydrazine and water mixture). Nitrogen gas was also used at the HBSF, as hydrazine fuels were stored under a blanket of nitrogen gas. The last of the hydrazine was removed from the HBSF at the end of April 1986 and shipped to a permitted, off-site disposal facility. Since that time, the four hydrazine tanks (HAS-1, HAS-2, HAS-3, and CS-1) and the two unsymmetrical dimethyl hydrazine tanks (US-1 and US-2) in the west yard have been rinsed by RMA personnel with a hypochlorite and water solution to remove the last traces of hydrazine fuels. Work has begun on assessment of wastewater treatment alternatives and a facilities decommissioning assessment (James, 1987).

The primary process liquids present at the HBSF during its operational history included hydrazine, unsymmetrical dimethyl hydrazine, monomethyl hydrazine, and water. Calcium hypochlorite, in granular form, was also used at the HBSF to destructively decompose hydrazine fuels in wastewater in the in-ground storage tank. Hydrazine, unsymmetrical dimethyl hydrazine, and monomethyl hydrazine are, under normal conditions, ignitable, corrosive, carcinogenic, and toxic. Unsymmetrical dimethyl hydrazine, when exposed to air, reacts to form small quantities of n-nitrosodimethylamine (NNDMEA), a known carcinogen.

An estimated 300,000 gallons of wastewater were generated annually at the hydrazine facility from the combination of surface runoff, wash water, and process water (RMA, 1979). This wastewater was diverted to the in-ground concrete tank, treated with calcium hypochlorite, and sent to Basin F through the chemical sewer. The destructive decomposition of hydrazine fuels and waste water in the tank produced large quantities of sediment/sludge from the impurities in the calcium hypochlorite used to destroy the fuel/water mixture. The sludge (mainly a calcium carbonate sediment) was generated in unreported quantities. The sludge was collected, drummed, and transported to "pits" in Section 36 (Barbieri, 1985). The locations of the pits are unknown.

The hydrazine fuels, the breakdown products of hydrazine fuels, and related chemicals that may be present at the HBSF include the following (Boyle, 1975):

- o Ammonia;
- o Azomethane;
- o Calcium hypochlorite;
- o Dimethylamine;
- o Dimethylnitrosoamine or N-nitrosodimethylamine
or N,N'-dimethylnitrosoamine;
- o Dipiperazine;
- o Formaldehyde;
- o Formaldehyde hydrazine;
- o Hydrazine (anhydrous hydrazine);
- o Methane;
- o Methyl alcohol;
- o Monomethyl hydrazine (methyl hydrazine);
- o Monopropellant hydrazine;
- o Nitromethylamine;
- o Nitrous oxide;
- o Piperazine;
- o Trimethyl hydrazine;
- o Tripiperazine; and
- o Unsymmetrical dimethyl hydrazine.

Several actual sources of contamination were previously reported at the HBSF (RMA, 1976; Morstedt et al., 1977; RMA, 1978). These include the following:

- o Pipe flanges where meters were removed;
- o Leaking inspection plates on the storage tanks;
- o Leaking arm valves on load and unload stations;
- o Leaking pressure lines;
- o Leaking drum loading station valves;
- o Short fill-line hoses and cracked hoses;
- o Leaking valves in blender;
- o Cracks in the concrete slab of blender facility; and
- o Leaking drums stacked on the concrete slab.

Water and/or unsymmetrical dimethyl hydrazine reportedly accumulated in the concrete berm areas around the storage tanks on at least three occasions. The first recorded instance occurred in November 1975, when a power outage set off the fire protection system in the east yard. The volume of water sprayed into the concrete berm area prior to shutting off the system was sufficient to cause the 200,000 gallon unsymmetrical dimethyl hydrazine storage tank, US-4, to float. The water was pumped from the berm area to the fields east and south of the east yard (Trautmann, 1984/RIC 86009R01). A more exact description of the area to which this water was pumped has not been found. This general area was investigated in another study (see Task 7 CAR, Site 1-UNC). In May 1976, leaks from the same unsymmetrical dimethyl hydrazine tank put four inches of unsymmetrical dimethyl hydrazine in the pit around tank number US-4. The liquid was pumped to the in-ground concrete tank in the west yard for disposal (Trautmann, 1984/RIC 86009R01). In December 1982, the water deluge fire protection system was tripped again and it discharged water for two days (over the holidays). The diked area in the west yard overflowed, and there was a considerable ice problem. The water was pumped from the dike area by the fire department and the sprinkler system was repaired (Wash et al., 1983).

3.0 SITE INVESTIGATION

3.1 PREVIOUS SOIL INVESTIGATIONS

The soils in the HBSF area have been described by Kolmer & Anderson (1977/RIC 81295 R07) as the Ascalon - Vona - Truckton association. These soils are nearly level to strongly sloping, well-drained and somewhat excessively drained, loamy and sandy soils formed in wind-laid deposits on uplands. These soils have moderate (0.6 to 2 inch/hour) to high (2.0 to 6 inch/hour) permeabilities (Resource Consultants, 1982/RIC 82096R01). A soil gas survey was conducted in 1983 at the HBSF. The soil gas detectors were placed at 16 sample locations; two in the east yard, one between the yards, three outside the west yard, and the rest in the west yard. The detectors consisted of four inch-long curie point wires tipped with an absorbent. These were covered with aluminum cans, buried in shallow holes in the soil and left in place for seven days. After recovery, the contents of the absorbent were analyzed using a mass spectrometer. Any hydrazine and related hydrazine fuels that were trapped on the wire detectors were expected to have broken down during this process, producing, among other analytes, nitrogen. Levels of nitrogen over 20 times background values were detected in the mass spectrometric results (Trautmann, 1984/RIC 86009R01). This study was neither intended to, nor capable of, confirming the presence of hydrazine in the soil or groundwater beneath the HBSF.

The soil in and around the HBSF was not sampled for hydrazine or unsymmetrical dimethyl hydrazine prior to this Task 11 study. However, during the Task 7 field study (UNC-1), six borings were drilled in the vicinity of the HBSF to a depth of 5 ft, and the 0 to 1 ft and 4 to 5 ft samples were composited for analysis. With the exception of one boring (Boring 3, UNC-1) located north of the unsymmetrical dimethyl hydrazine tanks in the drainage ditch that flows east to First Creek, where dieldrin was detected in small amounts, the only target compounds found in soil samples from the Task 7 field study (Site UNC-1) were metals. The same boring showed a single nontarget compound, hexadecanoic acid, at low concentrations (0.5 micrograms per gram (ug/g)). None of the other Task 7 borings indicated potential contamination. This area (near Boring 3, 1-UNC) is to be investigated in a Phase II program under Task 7 for organochlorine pesticides and ICP metals.

3.2 PHASE I SURVEY

3.2.1 Phase I Program

The Site 1-7 Phase I investigation consisted of drilling 15 borings, obtaining 54 soil samples for chemical analysis, and installing two monitoring wells. Eight borings were drilled in the area surrounding and between the two yards of the HBSF. The remaining 7 borings were drilled within the yards (5 in the west yard and 2 in the east yard). Borings were sited in low areas where the potential for contamination was more likely, along railroad tracks where loading and unloading operations could have caused leaks or spills, beneath the overhead pipelines, and in the areas where previous studies indicated potential contamination. Borings were not placed in the low area southeast of Site 1-7 where records indicate excess water from inadvertent activation of the fire protection system was pumped (Section 2.0). The reasons for this were: 1) the water was not considered contaminated; and 2) the area is outside of Site 1-7 and in another study area (see Task 7 CAR, Site 1-UNC). The borings ranged in depth from 5 to 40 ft. The two borings drilled to 40 ft were used for the installation of monitoring wells (Borings 11 and 14). These two borings were not sampled below the water table. Boring locations are shown in Figure 1-7-1.

The depth of the borings as actually sampled and the number of samples are summarized as follows.

<u>Boring Number</u>	<u>Depth (feet)</u>	<u>Number of Samples</u>
1	10	3
2	17.5	6
3	5	2
4	25	6
5	5	2
6	5	2
7	10	3
8	10	3
9	5	2
10	10	3
11	40*	5
12	10	4

<u>Boring Number</u>	<u>Depth (feet)</u>	<u>Number of Samples</u>
13	15	4
14	40*	6
15	10	3

* Drilled to 40 ft, but only sampled above the saturated zone at approximately 20 ft.

Fifteen borings yielding 54 samples were completed in Phase I at Site 1-7.

The Task 11 soil boring program was conducted using a continuous core auguring technique. Samples obtained from the 0 to 1 ft and 4 to 5 ft intervals and at subsequent 5 ft intervals were analyzed. In addition, intervening sections of the continuous sample were also preserved for laboratory analysis if monitoring during field operations detected readings above the background readings. See Section 3.1.2.2 for a description of monitoring equipment used during field operations.

Saturated conditions were found in the borings at depths of between 17.5 to 21 ft below land surface (Figure 1-7-4 indicates water levels from nearby wells for comparison). This is shallower than the water table depth projected from water levels in nearby monitoring wells.

All soil samples were analyzed by gas chromatography/mass spectrometry (GC/MS) for volatile organics (except the 0-1 ft interval) and organic pesticides; by an inductively coupled plasma (ICP) screen for metals; by separate analyses for mercury, arsenic, and dibromochloropropane (DBCP); by high-pressure liquid chromatography (HPLC) for hydrazines; and by gas chromatography (GC) for nitrosamines. Appendix 1-7-A (Table 1-7-A1) presents the specific target analytes for which laboratory analyses were conducted. A summary of the results of these analyses is presented in Table 1-7-3, Section 3.2.4 of this report.

3.2.2 Phase I Field Observations

At the time of the Task 11 Phase I investigation, the HBSF appeared as described in Section 1.0 of this report. Ambient air monitoring was conducted during

drilling operations using an organic vapor analyzer (OVA), an MB meter for chemical agent detection, an M260 meter to detect oxygen concentrations and explosive levels, and a hydrazine meter. An MB alarm was used to monitor for the presence of chemical agents in the borehole and samples according to standard operating procedures. The MB alarm is used specifically to detect sarin (GB) and VX at detection levels of 0.2 and 0.4 milligrams per cubic meter (mg/m^3) after a response time of 2 to 3 minutes (USAMDARC, 1982; USAMDARC, 1979). However, many other substances can cause the MB alarm to respond, including smoke and engine exhaust.

The M18A2 is used as a backup test if an MB alarm is triggered, as a substitute for an MB, and as a specific check for the presence of mustard. The M18A2 detects G agents (including tabun, GA; sarin, GB; and soman, GD); V agents; all forms of mustard (mustard, H; distilled mustard, HD; thickened mustard, HT; nitrogen mustard, HN); cyanogen chloride, CK; phosgene oxime, CX; lewisite, L; ethyldichloroarsine, ED; and methyldichloroarsine, MD (HDOA, 1976). The detection limit for mustard agents is $0.5 \text{ mg}/\text{m}^3$; the detection limit for GB is $0.2 \text{ mg}/\text{m}^3$.

An M18A2 test kit was used to refute the presence of chemical agents when the MB alarm was triggered during drilling of Boring 13. The M18A2 kit was used a second time during the drilling of Boring 14 because of the unavailability of a functioning MB meter. All results from the MB meter and the M18A2 kit were negative for chemical agents.

No substantial levels of contaminants were detected in the breathing zone, in the boring or above the soil sample during drilling operations, with one exception. During the drilling of Boring 12, at a depth of 7.5 to 8.5 ft, readings were observed on the OVA at approximately 600 parts per million (ppm) in the boring and up to 80 ppm emanating from the sample. These readings were coincidental with the sample having a distinct dark to medium green color which was not observed in any of the other borings. These sections of the core were sampled and sent for chemical analysis. The results of the chemical analyses (Table 1-7-3) indicated that target compounds were not detected in any of the samples at levels greater than the indicator levels, except arsenic (at 12 ug/g in the 4-5

ft sample), zinc (at 100, 130 and 100 ug/g in the 4-5 ft, 7.5-8.5 ft, and 9-10 ft samples, respectively), and copper (at 39 ug/g in the 9-10 ft sample). However, nontarget compounds (Table 1-7-4), as yet unidentified, detected at greater than 10 ug/g in the 4 to 5 ft, 7.5 to 8.5 ft, and 9 to 10 ft sample in Boring 12, may be the cause of the high volatile readings emanating from the soil boring.

3.2.3 Geophysical Exploration

No geophysical surveys were employed to clear drilling sites; however, various utility maps were examined prior to staking these locations. No underground lines or pipes were encountered during drilling.

3.2.4 Phase I Analyte Levels and Distribution

For each of the analytical methods used at this site, soil samples were analyzed for the chemical analytes listed in Appendix 1-7-A. With the exception of Boring 10, where methylisobutyl ketone was detected at a low level, and Boring 1, where dieldrin was detected at a low level, only metals were found in the soil samples. The number of samples containing these analytes; the concentration range, median, mean, standard deviation, detection limit, and indicator level are listed in Table 1-7-2. The results of geologic field observations, air monitoring during drilling, and the chemical analyses conducted on each soil sample are summarized in Table 1-7-3.

Indicator levels and ranges were established to assess the significance of metal and organic analytical values. The indicator level is the method detection limit for organic compounds. The indicator range for metals reflects the concentrations expected to occur naturally in RMA alluvial soils. Selection of these ranges is discussed in the Introduction to the Contamination Assessment Reports (ESE, 1986).

The distribution of analytes detected within or above indicator levels in the Phase I soil sampling is presented in Figure 1-7-6. A tabulation of all analytical data from the Phase I program is presented in Appendix 1-7-B, and the analytical data from the blanks is presented in Appendix 1-7-C.

Table 1-7-2. Analysis of Data on Chemical Constituents Detected in Soils During Phase 1 Field Study.

Constituent Detected	Number of Samples*	Concentration (ug/g)							Indicator Levels
		Range	Median**	Mean**	Standard Deviation**	UBTL	CAL		
						Detection Limit	Detection Limit		
<u>Volatiles (N=39)</u>									
Methylisobutyl Ketone	1		-	-	-	0.5	0.5	DL	
<u>Semivolatiles (N=54)</u>									
Dieldrin	1	0.4	-	-	-	0.3	0.3	DL	
<u>ICP Metals (N=54)</u>									
Cadmium	1	1.7	-	-	-	0.74	0.66	1-2	
Chromium	39	8.1-27	13	14	4.4	6.5	5.2	25-40	
Copper	52	5.8-81	14	22	16	4.7	4.9	20-35	
Lead	29	11-130	17	25	28	8.4	13	25-40	
Zinc	53	24-150	60	68	32	8.7	9.5	60-80	
<u>Arsenic (N=54)</u>	5	3.1-12	3.4	5.2	3.4	2.5	5	10	
<u>Mercury (N=54)</u>	2	0.086-0.092	-	-	-	0.005	0.06	0.1	

DL - The indicator level is the detection limit for UBTL and CAL, as appropriate

N - Number of samples analyzed

* - Number of samples in which constituent was detected; only these samples were used in statistical analyses

** - Median, mean, and standard deviation not calculated when constituent detected in fewer than 5 samples

Table 1-7-3. Results of Phase I Field Study, Soil Samples.

Depth (feet)	Boring 1		
	0-1	4-5	9-10
Geologic Material	Clayey, Gravelly Sand	Sand	Sandy Conglomeratic, Claystone
Percent Fines VO	25	0	70

AIR MONITORING

Volatile Organic Readings (ppm)

HNH ⁸	NR	NR	NR
OVA ⁸	1.5*	2.0*	2.0

SOIL CHEMISTRY

Volatiles (ug/g)

Methyl isobutyl ketone

NA	BDL	BDL
----	-----	-----

Semivolatiles (ug/g)

Dieldrin

0.4	BDL	BDL
-----	-----	-----

Dibromochloropropane (ug/g)

None detected

Hydrazines (ug/g)

None detected

Nitrosamines (ug/g)

None detected

Metals (ug/g)

Cadmium
Chromium
Copper
Lead
Zinc

1.7	BDL	BDL
27	16	13
15	10	81
130	BDL	BDL
150	43	92

Arsenic (ug/g)

BDL	BDL	BDL
-----	-----	-----

Mercury (ug/g)

0.086	BDL	BDL
-------	-----	-----

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNH, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

Site 17
04/02/87

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Depth (feet)	Geologic Material	Boring 2					16.5-17.5
		0-1 Sandy, Silty Gravel 40	4-5 Clayey Silt 95	5.1-6.1 Clayey Silt 95	9.5-10 Clay, Weathered Claystone 100	14-15 Fractured Claystone 100	
Percent Fines VO							Claystone 100
AIR MONITORING							
<u>Volatile Organic Readings (ppm)</u>							
HNU ^a							
		NR	NR	NR	NR	NR	NR
OVA ^a							
		1.2*	1.4*	1.4*	1.2*	0.4*	0.4*
SOIL CHEMISTRY							
<u>Volatiles (ug/g)</u>							
Methyl isobutyl ketone							
		NA	BDL	BDL	BDL	BDL	BDL
<u>Semivolatiles (ug/g)</u>							
Dieldrin							
		BDL	BDL	BDL	BDL	BDL	BDL
<u>Dibromochloropropane (ug/g)</u>							
None detected							
<u>Hydrazines (ug/g)</u>							
None detected							
<u>Nitrosamines (ug/g)</u>							
None detected							
<u>Metals (ug/g)</u>							
Cadmium							
		BDL	BDL	BDL	BDL	BDL	BDL
Chromium							
		10	11	13	13	10	BDL
Copper							
		8.6	8.2	13	33	43	49
Lead							
		15	BDL	BDL	16	23	31
Zinc							
		34	34	45	89	110	100
<u>Arsenic (ug/g)</u>							
		BDL	BDL	BDL	3.4	BDL	BDL
<u>Mercury (ug/g)</u>							
		BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNU, magnitude above background

VO - As determined

* - Readings taken over cuttings

Table 1-7-3. Results of Phase 1 Field Study, Soil Samples (Continued).

Date	Depth (feet)	Geologic Material	Boring 3	
			0-1	4-5
04/02/87	1-7	Percent Fines VO	Sandy, Silty Clay 90	Silty Sand 10

AIR MONITORING

Volatile Organic Readings (ppm)

HNU ^s	NR	NR
OVA ^s	NR	0.2

SOIL CHEMISTRY

Volatiles (ug/g)

Methyl isobutyl ketone

NA BDL

SemiVolatiles (ug/g)

Dieldrin

BDL BDL

Dibromochloropropane (ug/g)

None detected

Hydrazines (ug/g)

None detected

Nitrosamines (ug/g)

None detected

Metals (ug/g)

Cadmium	BDL	BDL
Chromium	20	19
Copper	16	13
Lead	15	BDL
Zinc	63	56

Arsenic (ug/g)

3.2

Mercury (ug/g)

BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNU, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken overcutting

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Depth (feet) Geologic Material	Boring 4					24-25 Silty, Sandy Claystone
	0-1 Sandy Gravel 0	4-5 Sand, Trace Silt 5	9-10 Sandy Clay 60	14-15 Silty, Sandy Claystone 80	19-20 Silty, Sandy Claystone 80	
Percent Fines VO						60
AIR MONITORING						
Volatile Organic Readings (ppm)						
HNH ^s	NR	NR	NR	NR	NR	NR
OVA ^s	0.6	0.6	0.6	1.8	2.0	2.2*
SOIL CHEMISTRY						
Volatiles (ug/g)						
Methyl isobutyl ketone	NA	BDL	BDL	BDL	BDL	BDL
Semivolatiles (ug/g)						
Dieldrin	BDL	BDL	BDL	BDL	BDL	BDL
Dibromochloropropane (ug/g)						
None detected						
Hydrazines (ug/g)						
None detected						
Nitrosamines (ug/g)						
None detected						
Metals (ug/g)						
Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	BDL	15	14	BDL	BDL	11
Copper	6.5	8.2	10	43	47	46
Lead	BDL	BDL	BDL	BDL	BDL	BDL
Zinc	20	38	41	100	110	110
Arsenic (ug/g)						
	BDL	BDL	BDL	BDL	BDL	BDL
Mercury (ug/g)						
	BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNH, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Depth (feet)	Geologic Material	Boring 5		Boring 6	
		0-1	4-5	0-1	4-5
14	Silty Sand	30	Sand	clayey Sand	clayey Sand
11	Percent Fines	30	0	10	40
04/02/87	VO				
AIR MONITORING					
<u>Volatile Organic Readings (ppm)</u>					
HNUS					
		NR	NR	NR	NR
OVA ^S					
		NR	0	0.2*	0.2*
SOIL CHEMISTRY					
<u>Volatiles (ug/g)</u>					
	Methyl isobutyl ketone	NA	BDL	NA	BDL
<u>Semivolatiles (ug/g)</u>					
	Dieldrin	BDL	BDL	BDL	BDL
<u>N Dibromochloropropane (ug/g)</u>					
	None detected				
<u>Hydrazines (ug/g)</u>					
	None detected				
<u>Nitrosamines (ug/g)</u>					
	None detected				
<u>Metals (ug/g)</u>					
	Cadmium	BDL	BDL	BDL	BDL
	Chromium	15	13	20	18
	Copper	10	8.0	11	14
	Lead	16	BDL	13	BDL
	Zinc	48	33	43	60
<u>Arsenic (ug/g)</u>					
		BDL	BDL	BDL	BDL
<u>Mercury</u>					
		BDL	BDL	BDL	BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNUS, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Site 04/02/87	Depth (feet) Geologic Material Percent Fines VO	Boring 7				Boring 8			
		0-1 Silty Sand 15	4-5 Sand, Trace Silt 5	9-10 Silty, Sandy Claystone 90		0-1 Sandy Silt 60	4-5 Silty Clay 100	9-10 Claystone 100	
		AIR MONITORING							
		<u>Volatile Organic Readings (ppm)</u>							
		HNH ^a							
		NR	NR	NR		0	0	0	
		0.4*	0.2*	0.4*		0	0	0	
SOIL CHEMISTRY									
<u>Volatiles (ug/g)</u>									
Methyl isobutyl ketone									
		NA	BDL	BDL		NA	BDL	BDL	
<u>Semivolatiles (ug/g)</u>									
Dieldrin									
		BDL	BDL	BDL		BDL	BDL	BDL	
<u>2,2-Dibromochloropropane (ug/g)</u>									
		None detected							
<u>Hydrazines (ug/g)</u>									
		None detected							
<u>Nitrosamines (ug/g)</u>									
		None detected							
<u>Metals (ug/g)</u>									
Cadmium									
		BDL	BDL	BDL		BDL	BDL	BDL	
Chromium									
		11	8.6	12		17	10	17	
Copper									
		10	BDL	40		12	22	19	
Lead									
		120	BDL	22		17	BDL	13	
Zinc									
		38	24	98		52	58	60	
Arsenic									
		BDL	BDL	BDL		3.1	BDL	BDL	
Mercury									
		BDL	BDL	BDL		BDL	BDL	BDL	

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNH, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Depth (feet)	Geologic Material	Boring 9		Boring 10	
		0-1	4-5	0-1	4-5
		Gravel	Clayey Sand	Silty Clay	Sand, Trace Silt
Percent Fines	VO	0	40	100	5
Percent Fines	VO				70
AIR MONITORING					
Volatile Organic Readings (ppm)					
HNU ^a					
		NR	NR	NR	NR
OVA ^a					
		0	0	0	0
SOIL CHEMISTRY					
Volatiles (ug/g)					
	Methyl isobutyl Ketone	1	BDL	NA	BDL
Semivolatiles (ug/g)					
	Dieldrin	1	BDL	BDL	BDL
Dibromochloropropane (ug/g)					
	None detected				
Hydrazines (ug/g)					
	None detected				
Nitrosamines (ug/g)					
	None detected				
Metals (ug/g)					
	Cadmium	1	BDL	BDL	BDL
	Chromium	1	16	10	BDL
	Copper	1	18	12	13
	Lead	1	19	21	BDL
	Zinc	1	80	56	39
Arsenic					
	1	1	4.2	BDL	BDL
Mercury					
	1	1	BDL	BDL	BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

1 - 0-1 sample was loose gravel, no constituents analyzed

S - As referenced to calibration standard of methane for OVA and benzene for HNU, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

Table 1-7.3. Results of Phase I Field Study, Soil Samples (Continued).

Depth (feet) Geologic Material	Boring 11				
	0-1 Silt, Sand, Gravel	4-5 Sandy, Clayey Silt	9-10 Claystone	14-15 Claystone	19-20 Claystone
Percent Fines VO	40	90	100	100	100
AIR MONITORING					
<u>Volatile Organic Readings (ppm)</u>					
HNH ^a	NR	NR	NR	NR	NR
OVA ^a	1.4*	1.2	0.8	0.7	0.8
SOIL CHEMISTRY					
<u>Volatiles (ug/g)</u>					
Methyl isobutyl ketone	NA	BDL	BDL	BDL	BDL
<u>Semivolatiles (ug/g)</u>					
Dieldrin	BDL	BDL	BDL	BDL	BDL
<u>2,2-Dibromochloropropane (ug/g)</u>					
None detected					
<u>Hydrazines (ug/g)</u>					
None detected					
<u>Nitrosamines (ug/g)</u>					
None detected					
<u>Metals (ug/g)</u>					
Cadmium	BDL	BDL	BDL	BDL	BDL
Chromium	22	23	14	10	12
Copper	30	16	13	44	44
Lead	21	14	BDL	BDL	BDL
Zinc	110	62	73	120	110
Arsenic	BDL	BDL	BDL	BDL	BDL
Mercury	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNH, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

Site 1-7
04/02/87

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Site 1-7 04/02/87	Depth (feet)	Boring 12			
	Geologic Material	0-1 Sandy Silt 80	4-5 Silty Clay, Trace Sand 95	7.5-8.5 Sandy Claystone 50	9-10 Sandy Claystone 90
	Percent Fines VO				
AIR MONITORING					
Volatile Organic Readings (ppm)					
	HNUS	NR	NR	NR	NR
	OVA ^S	20*	30*	80*	20*
SOIL CHEMISTRY					
Volatiles (ug/g)					
	Methyl isobutyl ketone	NA	BDL	BDL	BDL
Semivolatiles (ug/g)					
	Dieldrin	BDL	BDL	BDL	BDL
Dibromochloropropane (ug/g)					
29	None detected				
Hydrazines (ug/g)					
	None detected				
Nitrosamines (ug/g)					
	None detected				
Metals (ug/g)					
	Cadmium	BDL	BDL	BDL	BDL
	Chromium	9.9	15	BDL	BDL
	Copper	17	25	31	39
	Lead	22	23	BDL	16
	Zinc	76	130	100	110
Arsenic					
		BDL	12	BDL	BDL
Mercury					
		0.092	BDL	BDL	BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNU, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Depth (feet)	Boring 13			
	0-1 Sandy Silt 60	4-5 Clayey Sand 20	9-10 Sandy Claystone 70	13-14 Sandy Claystone 90
Geologic Material				
Percent Fines VO				
AIR MONITORING				
<u>Volatile Organic Readings (ppm)</u>				
HNUS	NR	NR	NR	NR
OVA ^a	0	0	0	NR
SOIL CHEMISTRY				
<u>Volatiles (ug/g)</u>				
Methyl isobutyl ketone	NA	BDL	BDL	BDL
<u>Semivolatiles (ug/g)</u>				
Dieldrin	BDL	BDL	BDL	BDL
<u>Dibromochloropropane (ug/g)</u>				
None detected				
<u>Hydrazines (ug/g)</u>				
None detected				
<u>Nitrosamines (ug/g)</u>				
None detected				
<u>Metals (ug/g)</u>				
Cadmium	BDL	BDL	BDL	BDL
Chromium	10	14	BDL	BDL
Copper	12	16	44	48
Lead	19	19	14	18
Zinc	49	73	93	110
Arsenic	BDL	BDL	BDL	BDL
Mercury	BDL	BDL	BDL	BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNUS, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Depth (feet)	Boring 14					
	0-1	4-5	9-10	14-15	19-20	24-25
Geologic Material	Sandy Clay	Sand	Sand	Clayey Sand	Sandy Claystone	Sandy Claystone
Percent Fines V0	70	0	0	40	80	95
AIR MONITORING						
<u>Volatile Organic Readings (ppm)</u>						
HNUS	NR	NR	NR	NR	NR	NR
OVA ^s	0	0	0	0	0	3
SOIL CHEMISTRY						
<u>Volatiles (ug/g)</u>						
Methyl isobutyl ketone	NA	BDL	BDL	BDL	BDL	BDL
<u>Semivolatiles (ug/g)</u>						
Dieldrin	BDL	BDL	BDL	BDL	BDL	BDL
<u>Dibromochloropropane (ug/g)</u>						
None detected						
<u>Hydrazines (ug/g)</u>						
None detected						
<u>Nitrosamines (ug/g)</u>						
None detected						
<u>Metals (ug/g)</u>						
Cadmium	BDL	BDL	BDL	BDL	BDL	BDL
Chromium	11	BDL	8.1	BDL	BDL	BDL
Copper	14	6.3	5.8	8.4	39	41
Lead	26	11	BDL	BDL	14	13
Zinc	58	29	30	32	91	94
Arsenic	BDL	BDL	BDL	BDL	BDL	BDL
Mercury	BDL	BDL	BDL	BDL	BDL	BDL

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNUS, magnitude above background

V0 - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

04/02/87

Table 1-7-3. Results of Phase I Field Study, Soil Samples (Continued).

Site 1-7 04/02/87	Depth (feet) Geologic Material	Boring 15		
		0-1	4-5	9-10
		Sand	clayey Sand	Sand
	Percent Fines VO	0	30	0

AIR MONITORING

Volatile Organic Readings (ppm)

HNUS	NR	NR	NR
OVA ^S	0	0	0

SOIL CHEMISTRY

Volatiles (ug/g)

Methyl isobutyl ketone	NA	BDL	BDL
------------------------	----	-----	-----

Semivolatiles (ug/g)

Dieldrin	BDL	BDL	BDL
----------	-----	-----	-----

Dibromochloropropane (ug/g)

None detected

Hydrazines (ug/g)

None detected

Nitrosamines (ug/g)

None detected

Metals (ug/g)

Cadmium	BDL	BDL	BDL
Chromium	BDL	9.3	9.3
Copper	8.4	9.8	7.6
Lead	12	12	BDL
Zinc	37	42	38

Arsenic

Mercury

BDL - Below detection limit

NA - Not analyzed

NR - Not reported

S - As referenced to calibration standard of methane for OVA and benzene for HNU, magnitude above background

VO - As determined by visual observation and rounded to the nearest 5 percent

* - Readings taken over cuttings

In addition, several compounds were detected by GC/MS that were not included in the target compound list and that were not conclusively identified. Table 1-7-4 lists the boring number, sample interval depth, relative retention time (shown as "unknown number" on the table), concentration, sample number, lot, best-fit identification, and comments for these nontarget compounds detected at Site 1-7. It should be noted that an individual compound may have more than one retention time, and also that a particular retention time may be assigned to more than one compound. Therefore, Table 1-7-4 provides only a general indication of additional compounds that may be present.

3.2.5 Phase I Contamination Assessment

The HBSF soil samples have levels of several metals within or above indicator ranges (Table 1-7-3). The three most common are chromium, copper, and zinc, occurring at all 15 boring locations.

Copper was quantified (39-49 ug/g) above the indicator range (20-35 ug/g) only in the bedrock in 7 of the 15 borings (2,4,7,11,12,13, and 14) and at a slightly higher level (81 ug/g) in the bedrock sample of Boring 1. Zinc was quantified (89-120 ug/g) above the indicator range (60-80 ug/g) in the bedrock in 7 borings (1, 2, 4, 11, 12, 13, and 14). Slightly elevated concentrations of copper and zinc as noted here in the upper portion of the Denver Formation may be explained by the slightly higher metals content of the shale/siltstone. Zinc was quantified above the indicator range (60-80 ug/l) in surface samples from Borings 1 (150 ug/g) and 11 (110 ug/g). Lead was also quantified above the indicator range (25-40 ug/g) in surface samples from Borings 1 (130 ug/g) and 7 (120 ug/g). Finally, arsenic was quantified above the indicator range (4.7-10 ug/g) in the 4 to 5 ft interval in Boring 12 (12 ug/g).

Boring 1, located in a ditch draining the area west of the west yard of the HBSF that also drains the eastern portion of the South Plants manufacturing complex (Figure 1-7-6), shows high concentrations of zinc and lead in the 0 to 1 ft sample and of lead in the 4 to 5 ft sample. Boring 7, located beneath the overhead pipeline between the east and west yards, shows high concentrations of lead in the 0 to 1 ft sample. Boring 11, located in the center of the west yard, shows high concentrations of zinc in the 0 to 1 ft sample. The surface sample

Table 1-7-4. Tentative Identification of Nontarget Compounds Detected in Soils.

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)	Sample Number	Lot	Best Fit Identification	Comments
1	0-1			008	BC7		K
	4-5	635	0.4	002	BCV	unknown alkene or alcohol, possibly C9	K
				002	BCU		A, F
	9-10	611	0.4	003	BVC	nonanediolic acid, dibutyl ester	K, F
2		602	2.0	005	BBH	unknown phthalate, possibly butyl 2-methylpropyl	A, C, F
	0-1	606	0.9	005	BBH	unknown phthalate, possibly bis(2-methoxyethyl)	A, C, F
		616	0.4	005	BBH	unknown alkene	A, F
		628	3.0	005	BBH	not identified	A, F
		637	0.5	005	BBH	unknown alkene or alcohol	A, F
		642	0.7	005	BBH	1,2-benzenedicarboxylic acid, dioctyl ester	A, F
	4-5			004	BBL		K
				006	BBH		K
	5-6			005	BBL		K
				007	BBH		K
	9 1/2-10	45	1.6	006	BBL	acetone	F
		628	1.4	008	BBH	not identified	A, C, F
		642	0.7	008	BBH	dioctyl phthalate	C, F
	14-15	35	6.6	007	BBL	ethanol	C, F
		610	0.9	009	BBH	nonanediolic acid, dibutyl ester	C, F
		628	0.7	009	BBH	hexanediolic acid, dioctyl ester	C, F
		642	0.9	009	BBH	1,2-benzenedicarboxylic acid, dioctyl ester	F
	16-17	34	7.5	008	BBL	ethanol	F
		91	1.1	008	BBL	unknown hydrocarbon	A, F
		628	3.0	010	BBH	not identified	A, F
		642	1.0	010	BBH	1,2-benzenedicarboxylic acid, dioctyl ester	F

A - No positive identification;
C - Plasticizer
F - Low concentration
K - None detected

Table 1-7-4. Tentative Identification of Nontarget Compounds Detected in Soils. (cont'd)

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)	Sample Number	Lot	Best Fit Identification	Comments
3	0-1			002	BCS		K
	4-5			003	BCS		K
4	0-1	628	75	010	BCS	hexanedioic acid, dioctyl ester	C
		642	25.3	010	BCS		
	4-5			003	BCT		K
				005	BCS		K
	9-10			004	BCT		K
		610	0.4	006	BCS	nonanedioic acid, dibutyl ester	f
	14-15			005	BCT		K
				007	BCS		K
	19-20			006	BCS		K
				008	BCT		K
	24-25			007	BCS		K
				009	BCD		K
5	0-1			004	BCD		K
				003	BCE		K
6	4-5			005	BCD		K
	0-1			002	BCD		K
	4-5			002	BCE		K
				003	BCD		K
7	0-1			006	BCD		K
	4-5			004	BCE		K
				007	BCD		K
	9-10			005	BCE		K
				008	BCE		K

A - No positive identification;

C - Plasticizer

F - Low concentration

K - None detected

Table 1-7-4. Tentative Identification of Nontarget Compounds Detected in Soils. (cont'd)

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)	Sample Number	Lot	Best Fit Identification	Comments
8	0-1	583	0.5	002	BBM	unknown, possibly phosphoric acid tributyl ester	A, F
		602	0.6	002	BBM	unknown, possibly 1,2-benzenedicarboxylic acid phthalate ester	A, C, F
		606	0.5	002	BBM	unknown, possibly 1,2-benzenedicarboxylic acid phthalate ester	A, C, F
		616	0.3	002	BBM	unknown alkane	A, F
		628	0.6	002	BBM	hexanedioic acid, dioctyl ester	F
		637	0.4	002	BBM	unknown alkane	A, F
	4-5	593	0.4	002	BBM	unknown alkane	K
		598	0.4	003	BBM	unknown alkane	A, F
		602	1.1	003	BBM	unknown phthalate, possibly butyl 3-methyl propyl	A, C, F
		606	0.5	003	BBM	unknown phthalate, possibly bis (2-methoxyethyl)	A, C, F
		616	0.4	003	BBM	unknown alkane	A, F
		628	2.8	003	BBM	not identified	A, F
		642	0.5	003	BBM	1,2 benzene dicarboxylic acid, diisooctyl ester	F
9	9-10	593	0.8	003	BBM	unknown alkane	K
		598	1.0	004	BBM	unknown alkane	A, F
		602	2.0	004	BBM	unknown phthalate, possibly butyl 2-methyl propyl	A, C, F
		606	0.7	004	BBM	unknown phthalate, possibly bis(2-methoxy ethyl)	A, C, F
	0-1	610	1.3	004	BBM	nonanedioic acid, dibutyl ester	F
		611	0.4	004	BBM	unknown alkane	F
		616	0.6	004	BBM	unknown alkane	A, F
		621	0.4	004	BBM	unknown alkane	A, F
		628	6.4	004	BBM	not identified	A, F
		637	0.4	004	BBM	unknown alkane	A, F
	4-5			008	BEG		K
				010	BED		K

A - No positive identification;
 C - Plasticizer
 F - Low concentrations
 K - None detected

Table 1-7-4. Tentative Identification of Nontarget Compounds Detected in Soils. (cont'd)

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)	Sample Number	Lot	Best Fit Identification	Comments	
10	0-1	605	0.8	002	BEU	hexadecanoic acid	F	
		609	20	002	BEU	alkane >C20	F	
		624	0.6	002	BEU	cholesta-4,6-pfen-3-01, benzoate	F	
		628	0.6	002	BEU	cholest-5-en-3-01-. acetate	F	
		629	0.8	002	BEU	decyl octyl phthalate	C, F	
		632	0.4	002	BEU	not identified	A, F	
		635	0.4	002	BEU	not identified	A, F	
		4-5	73	4.2	002	BEU	1,1,2-trichloro-1,2,2-trifluoroethane	F
			611	0.4	003	BDE	not identified	A, F
			617	0.6	003	BDE	not identified	A, F
626	0.5		003	BDE	9 octadecenamide	F		
11	9-10			003	BEU		K	
				004	BEU		K	
	0-1			002	BDP		K	
		4-5	605	1.0	002	BDM	di-n-butyl phthalate	K
	636		0.5	003	BDP	an alcohol greater than C ₁₇	C, F A, F	
	9-10			003	BDM		K	
		524		004	BDP		K	
		636		004	BDP		K	
	14-15			004	BDM		K	
		636	0.8	005	BDP	An alcohol greater than C ₁₇	A, F	
19-20			005	BDM		K		
			006	BDP		K		

A - No positive identification;
 C - Plasticizer
 F - Low concentration
 K - None detected

Table 1-7-4. Tentative Identification of Nontarget Compounds Detected in Soils. (cont'd)

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)	Sample Number	Lot	Best Fit Identification	Comments
12	0-1	605	0.5	006	BED	hexadecanoic acid	K
	4-5	536	50	005	BEG	related to acetic acid, possibly the anhydride	A
		540	10	007	BED	not identified	A,F
		542	5.0	007	BED	not identified	F
		544	0.6	007	BED	propane, 1-(1-ethoxyethoxy)	F
		546	0.8	007	BED	ethanol 2-(2-hydroxyethoxy)-, 1-nitrate	F
		567	1.0	007	BED	benzothiazole	F
		571	0.8	007	BED	acetamide, n-cyclohexyl	F
		602	3.0	007	BED	1,2-benzene dicarboxylic acid, butyl 2-methylpropyl ester	F
		605	2.0	007	BED	hexadecanoic acid	F
		613	2.0	007	BED	9-hexadecanoic acid	F
	7 1/2- 8 1/2	544	30	006	BEG	related to acetic acid	K
		561	1.0	008	BED	octanoic acid	A
		567	3.0	008	BED	benzothiazole	F
		591	0.5	008	BED	not identified	A,F
		605	1.0	008	BED	hexadecanoic acid	F
	9-10	545	30	007	BEG	related to acetic acid	K
		554	3.0	009	BED	not identified	A,F
		557	2.0	009	BED	pentyl cyclopropane	A,F
		562	2.0	009	BED	octanoic acid	F
		563	0.7	009	BED	trichlorinated unknown	F
		567	3.0	009	BED	benzothiazole	A,F
		571	0.3	009	BED	not identified	F
		584	0.5	009	BED	not identified	A,F
		602	0.3	009	BED	1,2-benzenedicarboxylic acid, bis(2-methoxyethyl) ester	F
		605	1.0	009	BED	hexadecanoic acid	F
		608	0.4	009	BED	2 (3H)-benzothiazolethione	F
		627	10	009	BED	hexanedioic acid, dioctyl ester	F
		643	0.3	009	BED	alkene >C20	F

A - No positive identification;

C - Plasticizer

F - Low concentration

K - None detected

Table 1-7-4. Tentative Identification of Nontarget Compounds Detected in Soils. (cont'd)

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)	Sample Number	Lot	Best Fit Identification	Comments
13	0-1 4-5	605 610	0.5 0.9	002	BED		K
				002	BEG		K
				003	BED		K
	9-10			003	BEG		K
14	0-1 4-5	102	1.1	004	BED		K
				005	BED	hexadecanoic acid, dibutyl ester	F
	9-10	596 601 602 603 604 605 606	2.0 1.0 0.5 1.0 0.3 2.0 10	005	BED	hexadecanoic acid, dibutyl ester	F
				008	BEU	hexene	K
				006	BEU		E,F
				009	BEU		K
	9-10	611 612 614 615 624 626 627 640	0.8 0.6 4.0 3.0 0.4 0.6 40 30	007	BEU	tetradecanoic acid	K
				010	BEU	pentadecanoic acid	F
				010	BEU	not identified	F
				010	BEU	hexadecane nitrile	A,F
				010	BEU	not identified	F
				010	BEU	9-hexadecanoic acid	A,F
				010	BEU	hexadecanoic acid	F
				010	BEU	non anedioic acid, dibutyl ester	F
				010	BEU	alkene C ₁₉	F
				010	BEU	octadecane nitrile	F
14-15	610	610	0.4	010	BEU	cyclic alkane C ₂₀	F
				010	BEU	octadecanoic acid	F
				010	BEU	nonanamide	F
				010	BEU	hexanedioic acid, bis(2-ethyl hexyl) ester	F
				010	BEU	9-octadecanamide	F
				010	BEU	hexanedioic acid, dioctyl ester	F
				010	BEU	dioctyl phthalate	C
				002	BFF	nonanedioic acid, dibutyl ester	K
				004	BFD		F

A - No positive identification;
 C - Plasticizer
 F - Low Concentration
 K - None detected

Table 1-7-4. Tentative Identification of Nontarget Compounds Detected in Soils. (cont'd)

Borehole Number	Interval Depth (ft)	Unknown Number	Concentration (ppm)	Sample Number	Lot	Best Fit Identification	Comments
14(cont'd)	19-20			003	BFF		K
				003	BFD		K
	24-25			004	BFF		K
				004	BFD		K
15	0-1	627	0.4	005	8EU	hexanedioic acid, dioctyl ester	F
	4-5	602	0.4	004	8EU	1,2-benzenedicarboxylic acid, bis(2-methoxyethyl) ester	K
							F
		605	0.9	006	8EU	hexadecanoic acid	F
	9-10	627	0.5	005	8EU	hexanedioic acid, dioctyl ester	K
							F

A - No positive identification;

C - Plasticizer

K - None detected

was taken immediately beneath an area paved with asphalt. Boring 12, located west of the sump in the west yard, shows high concentrations of arsenic and zinc in the 4 to 5 ft sample. The 7.5 to 8.5 ft sample in this boring was very green in color, but this sample is at the bedrock surface and the slightly elevated zinc concentrations observed in this sample are typical of the Denver Formation.

The only other target analytes confidently identified and quantified in the soil samples were methylisobutyl ketone and dieldrin. Methylisobutyl ketone was detected only once in a 4 to 5 ft sample from Boring 10 at a low concentration (1.0 ug/g). Boring 10 is located on the railroad tracks west of the blending facility in the west yard. Methylisobutyl ketone detected at this level could reflect contamination in the laboratory. Dieldrin was detected in only one sample (Boring 1 surface sample) at a low concentration (0.4 ug/g). Boring 1 is located in a ditch draining the area west of the west yard of the HBSF. This ditch also drains the eastern portion of the South Plants area.

Nontarget compounds showed varying concentrations (Table 1-7-4) from boring to boring at levels generally less than 10 ug/g. Several nontarget compounds were detected at higher levels (up to 75 ug/g) in four separate borings.

The surface sample from Boring 4 showed 75 ug/g of a compound tentatively identified as dioctyl ester hexanedioic acid, a natural material, and 25.3 ug/g of dioctyl phthalate, a plasticizer. Boring 4 is located on the railroad track.

The surface sample from Boring 10 showed 20 ug/g of an unknown alkane with more than 20 carbons. Boring 10 is located on the railroad tracks west of the blending facility in the west yard.

The three deepest samples from Boring 12 located west of the in-ground concrete tank in the west yard contain high levels (30-50 ug/g) of an unidentified compound. These high concentrations of nontarget analytes occur in the vicinity of the green sample discussed in Section 3.2.2 (7.5-8.5 ft).

The 9 to 10 ft sample from Boring 14 on the northeast corner of the east yard contains high concentrations of dioctyl ester hexanedioic acid (40 ug/g) and

dioctyl phthalate (30 ug/g). As indicated above, dioctyl ester hexanedioic acid is considered a natural compound and dioctyl phthalate is a plasticizer. Phthalates are considered likely lab contaminants.

The semivolatile method, although not certified for volatile compounds, has been shown to be capable of detecting tetrachloroethylene, toluene, chlorobenzene, ethylbenzene, and xylenes in the nontarget fraction. The absence of these compounds in the nontarget results for this site is an indication that there is no contamination present from these compounds.

3.3 PHASE II SURVEY

The results of the Phase I program indicate the need for a Phase II program to confirm the presence of potential contaminants above established indicator levels detected in Phase I.

The objectives of the Phase II soil sampling plan for Site 1-7 are to assess the following:

- o The presence of lead, zinc and dieldrin near Boring 1;
- o The identification or confirmation of the nontarget compounds tentatively identified in Boring 4;
- o The extent of lead near Boring 7;
- o The presence of methylisobutyl ketone and the identification and confirmation of the nontarget compounds tentatively identified in Boring 10;
- o The lateral and vertical extent of zinc near Boring 11;
- o The lateral and vertical extent of arsenic and zinc, and the identification or confirmation of the nontarget compounds tentatively identified in Boring 12; and
- o The identification or confirmation of the nontarget compounds tentatively identified in Boring 14.

The number of borings and samples to be taken at specific depths during the Phase II study are tabulated below.

<u>Number of Borings</u>	<u>Depth (feet)</u>	<u>Number of Samples</u>
9	5	18
6	10	18
6	15	24

Twenty-one additional borings are proposed yielding 60 samples. The locations of the borings and the sampling proposed for Phase II are shown in Figure 1-7-7. The number of samples to be tested for each analyte is listed below.

<u>Analytical Method</u>	<u>Number of Samples</u>
Organochlorine pesticides (OCP)	6
Arsenic (As)	9
ICP metals	30
DCPD, BCFD, MIBK	9
Volatile organics (+10)	36

3.4 QUANTITY OF POTENTIALLY CONTAMINATED SOIL

In the interest of performing a complete study of RMA, the HBSF was considered by the Program Managers Office (PMO) to be a potentially contaminated site. The maximum soil volume that may need to be remediated was initially estimated (RMAOCPMT, 1984/RIC 84034R01) as the entire area of Site 1-7 times an excavation depth of 3 ft. The estimate is shown below.

$$\text{Areal Extent} = 691,200 \text{ ft}^2$$

$$\text{Vertical Extent} = 3 \text{ ft}$$

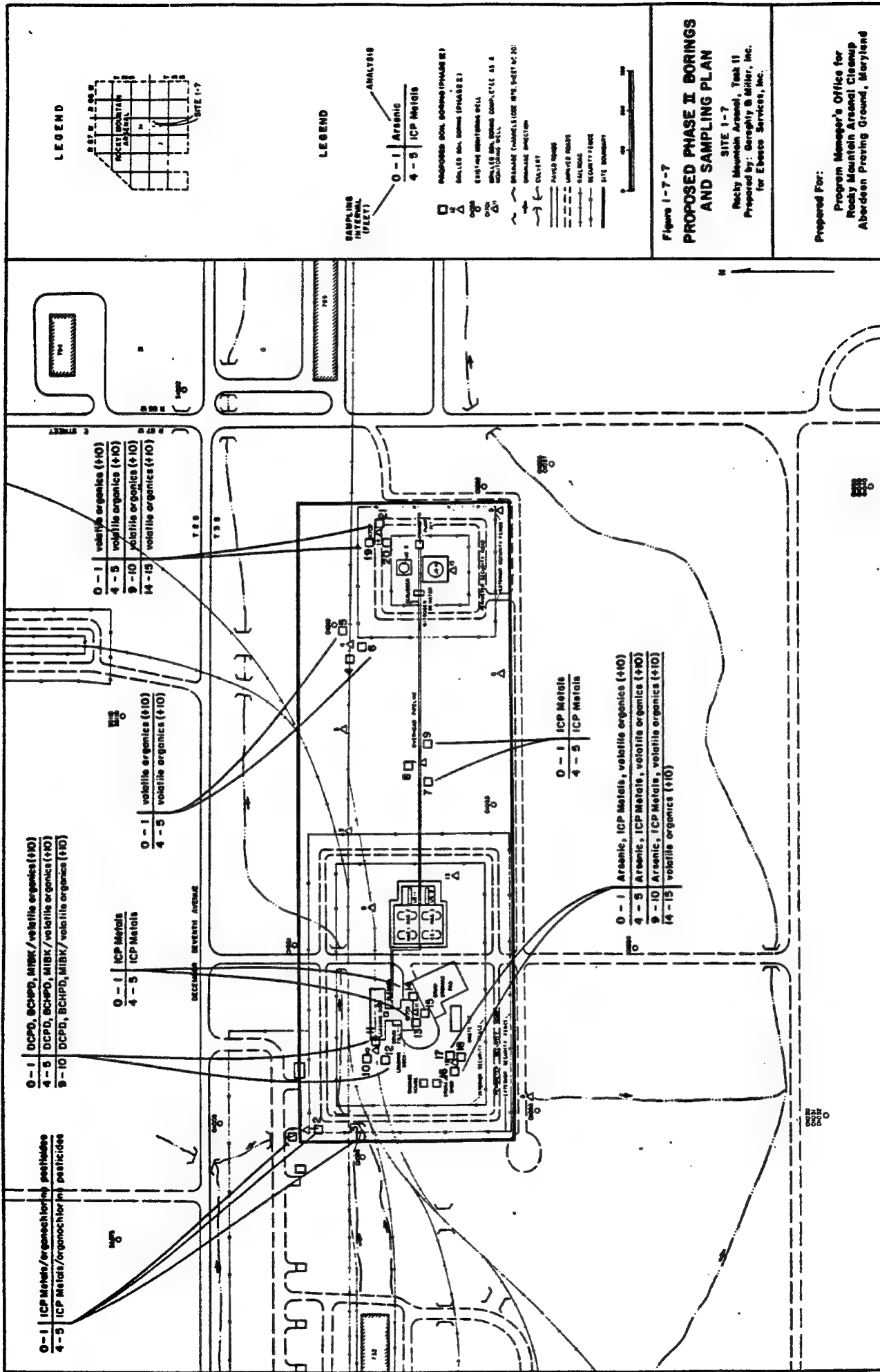
$$\text{Volume} = 77,000 \text{ cubic Yards (yd}^3\text{)}$$

The results of the Phase I program show no target contaminants above the indicator level in the east yard. A revised estimate of the maximum volume of soil which may need to be excavated is shown below. Further revisions of this estimate will be made on completion of the proposed Phase II program.

$$\text{Areal Extent} = 588,200 \text{ ft}^2$$

$$\text{Vertical Extent} = 3 \text{ ft}$$

$$\text{Volume} = 65,400 \text{ yd}^3$$



LEGEND



LEGEND

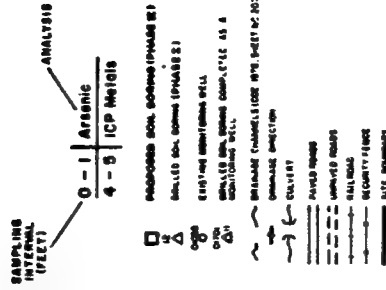


Figure 1-7-7

PROPOSED PHASE II BORINGS AND SAMPLING PLAN

SITE 1-7
Rocky Mountain Arsenal, Task II
Prepared by: Garofalo & Miller, Inc.
for Eberco Services, Inc.

Prepared For:

Program Manager's Office for
Rocky Mountain Arsenal Cleanup
Aberdeen Proving Ground, Maryland

Results from the Phase I survey were used to generate a most conservative (worst-case) estimate of the volume of potentially contaminated soil at Site 1-7. This delineation of the boundaries of potential contamination should not be construed to indicate the actual presence of contamination within the volumes outlined. In addition, this approach is not intended to imply that any or all of the soil within the potentially contaminated volume must be remediated, nor does it make any assumption about the type of remediation that may be required. Rather, this approach is intended to provide preliminary estimates of the maximum possible volume of contaminated materials for planning purposes only.

4.0 REFERENCES CITED

- Boyle, R.E., 1975. Minutes of meeting: Toxic hazards & related problems of hydrazine fuels, 8-10 December 1975, Brooks AFB, Texas. Product & Environmental Assurance Directorate, RMA. Microfilm RMA023, Frames 0346-0349.
- RIC 81266R27.
- Broughton, J.D., W.L. Miller, and G.B. Mitchell, 1979. Geology and groundwater definition, Basin A area, Rocky Mountain Arsenal, Commerce City, Colorado. USAEWES.
- Barbieri, G., 1985. Personal communication to G. Bradbeer, Geraghty & Miller, Inc.
- Barbieri, G., and D. Strang, 1961. Hydrazine blending facility maps. Omaha District COE and RMA.
- Dept. of the Army, 1975. Hydrazine area, Bldg. 758, plan and details. E4-72-4 and E4-72-8.
- ESE (Environmental Science and Engineering). 1986. Introduction to the Contamination Assessment Reports. RMA. Prepared for Program Manager's Office for Rocky Mountain Arsenal Contamination Cleanup.
- HDOA (Headquarters-Department of the Army). 1976. Technical manual, detector kit, chemical agent, ABC-M18A2. TM3-6665-254-12.
- James, T., 1987. Personal Communication to M. Schultz, EnviroSphere.
- RIC 81266R34.
- Kolmer, J. R., 1975. Analysis of exploratory drilling data, Rocky Mountain Arsenal, Colorado. RMA.
- RIC 81295R07
- Kolmer, J.R., and G.A. Anderson, 1977, July. Installation restoration of RMA, Part I-Pilot containment operations final Environmental Impact Statement. Department of the Army.
- RIC 82295R01.
- May, J.H., 1982. Regional groundwater study of Rocky Mountain Arsenal, Colorado: Report #1, Hydrogeological definition. USAEWES.
- RIC 83299R01.
- May, J.H., J.D. Crabtree, R.W. Hunt, and W.L. Murphy, 1983. Hydrogeology of Basin A/South Plants area, Rocky Mountain Arsenal, Colorado, Phase I. USAEWES.
- Morstedt, C.S. et al. 1977. Safety Survey of the UDMH/hydrazine blending and storage facility. RMA Safety Survey Team. Microfilm RMA023, Frames 0227-0234.

RIC 81266R68.

FMCDIR. 1977. Installation assessment of RMA records evaluation report #107, Volumes I, II & Appendices. Edgewood.

RMA. 1976. Partial list of uncompleted work at old plant causing leaks. RMA Command Office. Microfilm RMA023, Frame 0350.

RMA. 1978. Military construction project data sheet, P-341, Project 5A-157-8. RMA. Microfilm RMA099, Frames 0487- 0488.

RMA. 1979. P-341 project modify hydrazine fuel facility safety site plan narrative. Technical operations and installation services. Microfilm RMA081, Frames 2249-2253.

RIC 83326R01.

RMAOCPMT. 1983. Selection of a contamination control strategy for Rocky Mountain Arsenal, 2 volumes. USATHAMA & RMA.

RIC 84034R01.

RMAOCPMT. 1984. Decontamination assessment of land and facilities at Rocky Mountain Arsenal, Draft Final Report and Executive Summary. RMA, USATHAMA, and D'Appollonia. Microfilm RAA031, Frame 055-0672.

RIC 82096R01.

Resource Consultants, Inc., 1982, March. Surface Water Hydrologic Analysis, Rocky Mountain Arsenal, Commerce City, Colorado. Sterns-Roger and USATHAMA.

RIC 81293M01.

Romero, J.C., and G. Ward, 1981. Water table contour map of the Rocky Mountain Arsenal region, southwest Adams County, Colorado. Colorado Division of Water Resources.

RIC 83228R01

Spaine, P.W. and R. Gregg. 1983, July. Surface-water quality study of the South Plants area, data report. USAEWES and RMA. Microfilm RAA045, Frame 0304-0343.

RIC 81293R05.

Stollar, R.L., and F. van der Leeden, 1981, January. Evaluation of the hydrogeologic system & contamination migration patterns, Rocky Mountain Arsenal, Final Report. Geraghty & Miller, Inc.

RIC 83368R01.

Stout, K., and L. Abbott. 1982. Installation assessment, RMA, Volumes I and II. Bionetics Corporation, EPA, and USATHAMA.

Strang, D.W. 1982. Chronology and status of hydrazine blending operations at RMA. Industrial Division, RMA. Microfilm RMA034, Frames 0467-470.

Trautmann, W.L. 1984. Rocky Mountain Arsenal preliminary monitoring plan for the hydrazine blending facility, preliminary report.

USAMDARC (U.S. Army Material Development and Readiness Command). 1979. Safety regulations for chemical agent H. DARCOM-R 385-31. Department of the Army.

USAMDARC (U.S. Army Material Development and Readiness Command). 1982. Safety regulations for chemical agents GM and VX. DARCOM-R 385-102. Department of the Army.

RIC 82091R02.

van der Leeden, F. 1981. Geohydrology control study, summary document. Geraghty & Miller, Inc.

Wash, T.J., F.L. Heyde, and J.M. Cecil. 1983. Draft: Minutes of meeting on decontamination of hydrazine facility, 25 January 1983. ARROOM and USAF. Microfilm RIA024, Frames 2188-2195.

APPENDIX 1-7-A

CHEMICAL NAMES AND ABBREVIATIONS

APPENDIX 1-7-A

Table 1-7-A1. Task 11 Analytical Parameters - Soil Samples.

ANALYTES	LEVEL OF CERTIFICATION	REFERENCE METHODS
<u>Volatile Organics</u>	Semi-Quantitative	EPA 624 (b)
chloroform EPA 8240 with		
1,1-dichloroethane		EPA 5030
methylene chloride		extraction (a)
1,2-dichloroethane		
1,1,1-trichloroethylene		
1,1,2-trichloroethylene		
carbon tetrachloride		
tetrachloroethylene		
trichloroethylene		
trans-1,2-dichloroethylene		
benzene		
toluene		
ethylbenzene		
chlorobenzene		
methyl isobutyl ketone (MIBK)		
dimethyldisulfide		
bicycloheptadiene		
dicyclopentadiene (DCPD)		
dibromochloropropane (DBCP)		
m-xylene		
o- and/or p-xylene		
<u>Semivolatile Organics</u>	Semi-Quantitative	EPA 8270 with EPA 3540
aldrin		
endrin extraction (a)		
dieldrin		
isodrin		
p,p'-DDT		
p,p'-DDE		
hexachlorocyclopentadiene		
1,4-oxathiane		
dithiane		
malathion		
parathion		
chlordan		
supona		
diisopropylmethyl phosphonate (DIMP)		
dimethylmethyl phosphonate (DMMP)		
atrazine		

APPENDIX 1-7-A

Table 1-7-A1. Task 11 Analytical Parameters - Soil Samples (continued).

ANALYTES	LEVEL OF CERTIFICATION	REFERENCE METHODS
<u>Semivolatile Organics</u> (cont'd.)		
dicylopentadiene (DCPD)		
vapona		
chlorophenylmethyl sulfide		
chlorophenylmethyl sulfoxide		
chlorophenylmethyl sulfone		
dibromochloropropane (DBCP)		
<u>ICP Metals Screen</u>	Quantitative	USATHAMA 75
chromium		
zinc		
cadmium		
copper		
lead		
<u>Arsenic</u>	Quantitative	EPA 7060 with EPA 3050 extraction (b)
<u>Mercury</u>	Quantitative	EPA 245.5 (c)
<u>Dibromochloropropane</u> (DBCP)	Quantitative	Developed by MRI for USATHAMA Certification
<u>Hydrazines</u>	Quantitative	Developed by UBTLfor USATHAMA
hydrazine		
1,1-dimethylhydrazine		
methylhydrazine		
<u>Nitrosamines</u>	Quantitative	EPA 607 (b)
di-n-propylnitrosamine (NNDNPA)		
n-nitrosodimethylamine (NNDMEA)		

References:

- (a) SW-846, 2nd ed., July 1982.
- (b) EPA-600/4-82-057, July 1982 Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.
- (c) EPA-600/4-79-020, Revised March 1983 Methods for Chemical Analysis of Water and Wastes.

APPENDIX 1-7-A

Table 1-7-A2. Task 11 Analytical Parameters - Water Samples

ANALYTES	LEVEL OF CERTIFICATION	REFERENCE METHODS
<u>Volatile Halogenated</u> <u>Organics</u> chlorobenzene chloroform 1,1-dichloroethane 1,2-dichloroethane 1,1,1-trichloroethylene 1,1,2-trichloroethylene tetrachloroethylene trichloroethylene 1,2-trans-dichloroethylene dichloromethane carbon tetrachloride	Quantitative	EPA 601 (a)
<u>Volatile Aromatic</u> <u>Organics</u> benzene toluene xylenes ethyl benzene	Quantitative	EPA 602 (a)
<u>Organochlorine</u> <u>Pesticides</u> aldrin endrin dieldrin isodrin chlordan hexachlorocyclopentadiene p,p'-DDT p,p'-DDE	Quantitative	EPA 608 (a)
<u>1,2 Dibromo-3-</u> <u>chloropropane (DBCP)</u> Certification	Quantitative	Developed by MRI for USATHAMA
<u>Dicyclopentadiene (DCPD)</u> <u>Bicyclopentadiene (BCHP)</u> Certification (a)	Quantitative Quantitative	Developed by MRI for USATHAMA

APPENDIX 1-7-A

Table 1-7-A2. Task 11 Analytical Parameters - Water Samples (continued).

ANALYTES	LEVEL OF CERTIFICATION	REFERENCE METHODS
<u>Organosulfur Compounds</u> chlorophenylmethyl sulfide chlorophenylmethyl sulfoxide chlorophenylmethyl sulfone 1,4-oxathiane dithiane	Quantitative	USATHAMA 4P
<u>Phosphonates</u> Diisopropylmethyl phosphonate (DIMP) Dimethylmethyl phosphonate phosphonate (DMMP)	Quantitative DIMP ESE method for DIMP	USATHAMA 4S for
<u>Organophosphorous Pesticides</u> malathion parathion supona vapona	Quantitative	EPA 8140 (b) modified for water
<u>Hydrazines</u> hydrazine (H) 1,1-dimethylhydrazine (UDMH) methylhydrazine (MMH)	Semi-Quantitative method	Colorimetric ASTM-D1385-78
<u>Nitrosamines</u> di-N-propylnitrosamine (NNDNPA) n-nitrosodimethylamine (NNDMEA)	Quantitative	EPA 607 (b)
<u>Metals by AA</u> arsenic	Quantitative	EPA 206.2 (b)
<u>Mercury</u>	Quantitative	EPA 245.1 (b)

APPENDIX 1-7-A

Table 1-7-A2. Task 11 Analytical Parameters - Water Samples (continued).

ANALYTES	LEVEL OF CERTIFICATION	REFERENCE METHODS
<u>Metals by ICP</u> chromium cadmium lead zinc copper magnesium calcium sodium	Quantitative	EPA 200.7 (b)
<u>Anions</u> sulfate nitrate chloride fluoride	Quantitative Contractor developed method	EPA 300 (b) and
GC/MS Confirm	None	EPA 624 + 625 (a)

References:

- (a) EPA-600/4-82-057, July 1982 "Methods for Organic Chemical Analysis of Principal and Industrial Wastewater."
- (b) EPA SW-846, 2nd ed., "Test Methods for Evaluating Solid Waste".

APPENDIX 1-7-B

PHASE I CHEMICAL DATA

The analytical results of the laboratory analyses of soil samples collected as part of the Phase I program comprise the first part of Appendix 1-7-B. Data are listed sequentially by boring number and successive depths below the surface. Within each depth, all analytes for which the samples were tested are listed alphabetically. Results are given as less than (LT) the detection limit for the test laboratory, or as detected concentrations above this limit. Based on the accuracy of laboratory test methods, values for organic compounds are considered accurate to one significant figure, values for metals are considered accurate to two significant figures.

The second part of Appendix 1-7-B contains data from the blanks associated with Phase I analytical work. Blanks for Phase I soil samples were based on a homogenized subsample of composited samples from a known uncontaminated soil that is stratigraphically similar to the RMA soils. Blanks for Phase I water samples were based on distilled water. Control samples, or blanks, are introduced into the train of environmental samples to function as monitors on the performance of the analytical method. These samples function as quality control (QC) samples, and are an integral part of the quality assurance (QA) program for the project. The method blanks listed in this Appendix were utilized to verify that the laboratory was not a source of sample contamination. If contamination was detected in a method blank, corrective actions were taken to assure that reported concentrations of target constituents reflected sample constituents, and not constituents introduced by the laboratory process.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0001	0-1	Soil	Aldrin	LT 3. -01	ug/g	BCS010
			Arsenic	LT 2.5 +00	ug/g	BDC005
			Atrazine	LT 3. -01	ug/g	BCS010
			Cadmium	1.7 +00	ug/g	BCX013
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS010
			Chlordane	LT 2. +00	ug/g	BCS010
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS010
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS010
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS010
			Chromium	2.7 +01	ug/g	BCX013
			Copper	1.5 +01	ug/g	BCX013
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR013
			Dibromochloropropane	LT 3. -01	ug/g	BCS010
			Dicyclopentadiene	LT 1. +00	ug/g	BCS010
			Vapona	LT 3. +00	ug/g	BCS010
			Dilsopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS010
			Dithiene	LT 4. -01	ug/g	BCS010
			Dieldrin	4. -01	ug/g	BCS010
			Endrin	LT 5. -01	ug/g	BCS010
			Mercury	8.6 -02	ug/g	BCY013
			Hydrazine	LT 5. +01	ug/g	BC0013
			Isodrin	LT 3. -01	ug/g	BCS010
			Methylhydrazine	LT 2. +02	ug/g	BCP007
			Malethion	LT 7. -01	ug/g	BCS010
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN013
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN013
			1,4-Oxathiane	LT 3. -01	ug/g	BCS010
			Lead	1.3 +02	ug/g	BCX013
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCS010
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BCS010
			Parathion	LT 9. -01	ug/g	BCS010
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BCS010

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0001	0-1	Soil	Unsymmetrical Dimethyl Hydrazine Zinc	LT 2. +02	ug/g	BC0013
				1.5 +02	ug/g	BCX013
0001	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BCT008
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BCT008
			1,1-Dichloroethane	LT 2. +00	ug/g	BCT008
			1,2-Dichloroethane	LT 2. +00	ug/g	BCT008
			1,2-Dichloroethane	LT 6. -01	ug/g	BCT008
			m-Xylene	LT 8. -01	ug/g	BCT008
			Aldrin	LT 3. -01	ug/g	BCV002
			Arsenic	LT 2.5 +00	ug/g	BDC006
			Atrazine	LT 3. -01	ug/g	BCV002
			Bicycloheptadiene	LT 4. -01	ug/g	BCT008
			Benzene	LT 3. -01	ug/g	BCT008
			Carbon Tetrachloride	LT 3. -01	ug/g	BCT008
			Cadmium	LT 7.4 -01	ug/g	BCX014
			Methylene Chloride	LT 2. +00	ug/g	BCT008
			Chloroform	LT 3. -01	ug/g	BCT008
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCV002
			Chlorobenzene	LT 1. +00	ug/g	BCT008
			Chlordane	LT 2. +00	ug/g	BCV002
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCV002
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCV002
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCV002
			Chromium	1.6 +01	ug/g	BCX014
			Copper	1.0 +01	ug/g	BCX014
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR014
			Dibromochloropropane	LT 2. +00	ug/g	BCT008
			Dibromochloropropane	LT 3. -01	ug/g	BCV002
			Dicyclopentadiene	LT 7. -01	ug/g	BCT008
			Dicyclopentadiene	LT 1. +00	ug/g	BCV002
			Vapona	LT 3. +00	ug/g	BCV002
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCV002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0001	4-5	Soil	Dithiane	LT 4. -01	ug/g	BCV002
			Dieldrin	LT 3. -01	ug/g	BCV002
			Dimethyldisulfide	LT 2. +01	ug/g	BCV008
			Endrin	LT 5. -01	ug/g	BCV002
			Ethylbenzene	LT 4. -01	ug/g	BCV008
			Mercury	LT 5.0 -02	ug/g	BCV014
			Hydrazine	LT 5. +01	ug/g	BCV014
			Isodrin	LT 3. -01	ug/g	BCV002
			Toluene	LT 3. -01	ug/g	BCV008
			Methylhydrazine	LT 2. +02	ug/g	BCV008
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCV008
			Malathion	LT 7. -01	ug/g	BCV002
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCV014
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCV014
			1,4-Oxathiane	LT 3. -01	ug/g	BCV002
			Lead	LT 8.4 +00	ug/g	BCV014
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCV002
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCV002
			Parathion	LT 9. -01	ug/g	BCV002
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BCV002
0001	9-10	Soil	Tetrachloroethane	LT 3. -01	ug/g	BCV008
			Trichloroethane	LT 5. -01	ug/g	BCV008
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BCV014
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BCV008
			Zinc	4.3 +01	ug/g	BCV014
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BCV002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BCV002
			1,1-Dichloroethane	LT 2. +00	ug/g	BCV002
			1,2-Dichloroethane	LT 2. +00	ug/g	BCV002
			1,2-Dichloroethane	LT 6. -01	ug/g	BCV002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0001	9-10	Soil	m-Xylene	LT 6. -01	ug/g	BCU002
			Aldrin	LT 3. -01	ug/g	BCV003
			Arsenic	LT 2.5 +00	ug/g	BCV007
			Atrazine	LT 3. -01	ug/g	BCV003
			Bicycloheptadiene	LT 4. -01	ug/g	BCU002
			Benzene	LT 3. -01	ug/g	BCU002
			Carbon Tetrachloride	LT 3. -01	ug/g	BCU002
			Cadmium	LT 7.4 -01	ug/g	BCX015
			Methylene Chloride	LT 2. +00	ug/g	BCU002
			Chloroform	LT 3. -01	ug/g	BCU002
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCV003
			Chlorobenzene	LT 1. +00	ug/g	BCU002
			Chlordane	LT 2. +00	ug/g	BCV003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCV003
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCV003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCV003
			Chromium	1.3 +01	ug/g	BCX015
			Copper	8.1 +01	ug/g	BCX015
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR015
			Dibromochloropropane	LT 2. +00	ug/g	BCU002
			Dibromochloropropane	LT 3. -01	ug/g	BCV003
			Dicyclopentadiene	LT 7. -01	ug/g	BCU002
			Dicyclopentadiene	LT 1. +00	ug/g	BCV003
			Vapona	LT 3. +00	ug/g	BCV003
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCV003
			Dithiane	LT 4. -01	ug/g	BCV003
			Dieldrin	LT 3. -01	ug/g	BCV003
			Dimethyldisulfide	LT 2. -01	ug/g	BCU002
			Endrin	LT 5. -01	ug/g	BCV003
			Ethylbenzene	LT 4. -01	ug/g	BCU002
			Mercury	LT 5.0 -02	ug/g	BCV015
			Hydrazine	LT 5. +01	ug/g	BCO015
			Isodrin	LT 3. -01	ug/g	BCV003
			Toluene	LT 3. -01	ug/g	BCU002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0001	9-10	Soil	Methylhydrazine	LT 2. +02	ug/g	BCP009
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCU002
			Malathion	LT 7. -01	ug/g	BCV003
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN015
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN015
			1,4-Oxethlene	LT 3. -01	ug/g	BCV003
			Lead	LT 8.4 +00	ug/g	BCX015
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCV003
			Dichlorodiphenyltrichloroethene	LT 5. -01	ug/g	BCV003
			Parathion	LT 9. -01	ug/g	BCV003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethy Phosphates	LT 6. -01	ug/g	BCV003
			Tetrachloroethene	LT 3. -01	ug/g	BCU002
			Trichloroethene	LT 5. -01	ug/g	BCU002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BCO015
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BCU002
			Zinc	9.2 +01	ug/g	BCX015
0002	0-1	Soil	Aldrin	LT 3. -01	ug/g	BBM005
			Arsenic	LT 2.5 +00	ug/g	BBN010
			Atrazine	LT 3. -01	ug/g	BBM005
			Cadmium	LT 7.4 -01	ug/g	BBP010
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BBM005
			Chlordane	LT 2. +00	ug/g	BBM005
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BBM005
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BBM005
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BBM005
			Chromium	1.0 +01	ug/g	BBP010
			Copper	8.6 +00	ug/g	BBP010
			Dibromochloropropane	LT 5.0 -03	ug/g	BBK008
			Dibromochloropropane	LT 3. -01	ug/g	BBM005
			Dicyclopentadiene	LT 1. +00	ug/g	BBM005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	0-1	Soil	Vapors	LT 3. +00	ug/g	BBM005
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BBM005
			Dithiane	LT 4. -01	ug/g	BBM005
			Dieldrin	LT 3. -01	ug/g	BBM005
			Endrin	LT 5. -01	ug/g	BBM005
			Mercury	LT 5.0 -02	ug/g	BBM010
			Hydrazine	LT 5. +01	ug/g	BBZ005
			Isodrin	LT 3. -01	ug/g	BBM005
			Methylhydrazine	LT 2. +02	ug/g	BBY005
			Malathion	LT 7. -01	ug/g	BBM005
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA005
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA005
			1,4-Oxethane	LT 3. -01	ug/g	BBM005
			Lead	1.5 +01	ug/g	BBP010
			Dichlorodiphenylethane	LT 6. -01	ug/g	BBM005
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BBM005
			Parathion	LT 9. -01	ug/g	BBM005
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BBM005
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBX005
			Zinc	3.4 +01	ug/g	BBP010
0002	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BBL004
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BBL004
			1,1-Dichloroethane	LT 2. +00	ug/g	BBL004
			1,2-Dichloroethane	LT 2. +00	ug/g	BBL004
			1,2-Dichloroethane	LT 6. -01	ug/g	BBL004
			m-Xylene	LT 8. -01	ug/g	BBL004
			Aldrin	LT 3. -01	ug/g	BBM006
			Arsenic	LT 2.5 +00	ug/g	BBM011
			Atrazine	LT 3. -01	ug/g	BBM006
			Bicycloheptadiene	LT 4. -01	ug/g	BBL004

Note: Results for Dibromochloropropene (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	4-5	Soil	Benzene	LT 3. -01	ug/g	BBL004
			Carbon Tetrachloride	LT 3. -01	ug/g	BBL004
			Cadmium	LT 7.4 -01	ug/g	BBP011
			Methylene Chloride	LT 2. +00	ug/g	BBL004
			Chloroform	LT 3. -01	ug/g	BBL004
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BBM006
			Chlorobenzene	LT 1. +00	ug/g	BBL004
			Chlordane	LT 2. +00	ug/g	BBM006
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BBM006
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BBM006
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BBM006
			Chromium	1.1 +01	ug/g	BBP011
			Copper	8.2 +00	ug/g	BBP011
			Dibromochloropropane	LT 5.0 -03	ug/g	BBK009
			Dibromochloropropane	LT 2. +00	ug/g	BBL004
			Dibromochloropropane	LT 3. -01	ug/g	BBM006
			Dicyclopentadiene	LT 7. -01	ug/g	BBL004
			Dicyclopentadiene	LT 1. +00	ug/g	BBM006
			Vapone	LT 3. +00	ug/g	BBM006
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BBM006
			Dithiane	LT 4. -01	ug/g	BBM006
			Dieldrin	LT 3. -01	ug/g	BBM006
			Dimethyldisulfide	LT 2. +01	ug/g	BBL004
			Endrin	LT 5. -01	ug/g	BBM006
			Ethylbenzene	LT 4. -01	ug/g	BBL004
			Mercury	LT 5.0 -02	ug/g	BB0011
			Hydrazine	LT 5. +01	ug/g	BB2006
			Isodrin	LT 3. -01	ug/g	BBM006
			Toluene	LT 3. -01	ug/g	BBL004
			Methylhydrazine	LT 2. +02	ug/g	BBY006
			Methylisobutyl Ketone	LT 7. -01	ug/g	BBL004
			Malathion	LT 7. -01	ug/g	BBM006
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA006
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	4-5	Soil	1,4-Oxathiane	LT 3.	-01	ug/g
			Lead	LT 8.4	+01	ug/g
			Dichlorodiphenylethane	LT 6.	-01	ug/g
			Dichlorodiphenyltrichloroethane	LT 5.	-01	ug/g
			Parathion	LT 9.	-01	ug/g
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	ug/g
			Tetrachloroethene	LT 3.	-01	ug/g
			Trichloroethene	LT 5.	-01	ug/g
			Unsymmetrical Dimethyl Hydrazine	LT 2.	+02	ug/g
			Ortho- & Para-Xylene	LT 5.	+00	ug/g
			Zinc	3.4	+01	ug/g
			1,1,1-Trichloroethane	LT 4.	-01	ug/g
			1,1,2-Trichloroethane	LT 4.	-01	ug/g
			1,1-Dichloroethane	LT 2.	+00	ug/g
0002	5.1-6.1	Soil	1,2-Dichloroethane	LT 2.	+00	ug/g
			1,2-Dichloroethane	LT 6.	-01	ug/g
			m-Xylene	LT 8.	-01	ug/g
			Aldrin	LT 3.	-01	ug/g
			Arsenic	LT 2.5	+00	ug/g
			Atrazine	LT 3.	-01	ug/g
			Bicycloheptadiene	LT 4.	-01	ug/g
			Benzene	LT 3.	-01	ug/g
			Carbon Tetrachloride	LT 3.	-01	ug/g
			Cadmium	LT 7.4	-01	ug/g
			Methylene Chloride	LT 2.	+00	ug/g
			Chloroform	LT 3.	-01	ug/g
			Hexachlorocyclopentadiene	LT 6.	-01	ug/g
			Chlorobenzene	LT 1.	+00	ug/g
			Chlordane	LT 2.	+00	ug/g
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	ug/g

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	5.1-6.1	Soil	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	88M007
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	88M007
			Chromium	1.3 +01	ug/g	88P012
			Copper	1.3 +01	ug/g	88P012
			Dibromochloropropane	LT 5.0 -03	ug/g	88K010
			Dibromochloropropane	LT 2. +00	ug/g	88L005
			Dibromochloropropane	LT 3. -01	ug/g	88M007
			Dicyclopentadiene	LT 7. -01	ug/g	88L005
			Dicyclopentadiene	LT 1. +00	ug/g	88M007
			Vapona	LT 3. +00	ug/g	88M007
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	88M007
			Dithiane	LT 4. -01	ug/g	88M007
			Dieidrin	LT 3. -01	ug/g	88M007
			Dimethyldisulfide	LT 2. +01	ug/g	88L005
			Endrin	LT 5. -01	ug/g	88M007
			Ethylbenzene	LT 4. -01	ug/g	88L005
			Mercury	LT 5.0 -02	ug/g	880012
			Hydrazine	LT 5. +01	ug/g	88Z007
			Isodrin	LT 3. -01	ug/g	88M007
			Toluene	LT 3. -01	ug/g	88L005
			Methylhydrazine	LT 2. +02	ug/g	88Y007
			Methylisobutyl Ketone	LT 7. -01	ug/g	88L005
			Melathion	LT 7. -01	ug/g	88M007
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	8CA007
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	8CA007
			1,4-Oxathiane	LT 3. -01	ug/g	88M007
			Lead	LT 8.4 +00	ug/g	88P012
			Dichlorodiphenylethane	LT 6. -01	ug/g	88M007
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	88M007
			Parathion	LT 9. -01	ug/g	88M007
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	88M007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	5.1-6.1	Soil	Tetrachloroethene	LT 3. -01	ug/g	BBL005
			Trichloroethene	LT 5. -01	ug/g	BBL005
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBX007
			Ortho- & Para-Xylene Zinc	LT 5. +00 4.5 +01	ug/g ug/g	BBL005 BBP012
0002	9.5-10	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BBL006
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BBL006
			1,1-Dichloroethane	LT 2. +00	ug/g	BBL006
			1,2-Dichloroethane	LT 2. +00	ug/g	BBL006
			1,2-Dichloroethane	LT 6. -01	ug/g	BBL006
			m-Xylene	LT 8. -01	ug/g	BBL006
			Aldrin	LT 3. -01	ug/g	BBM008
			Arsenic	3.4 +00	ug/g	BBN013
			Atrazine	LT 3. -01	ug/g	BBM008
			Bicycloheptadiene	LT 4. -01	ug/g	BBL006
			Benzene	LT 3. -01	ug/g	BBL006
			Carbon Tetrachloride	LT 3. -01	ug/g	BBL006
			Cadmium	LT 7.4 -01	ug/g	BBP013
			Methylene Chloride	LT 2. +00	ug/g	BBL006
			Chloroform	LT 3. -01	ug/g	BBL006
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BBM008
			Chlorobenzene	LT 1. +00	ug/g	BBL006
			Chloroethane	LT 2. +00	ug/g	BBM008
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BBM008
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BBM008
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BBM008
			Chromium	1.3 +01	ug/g	BBP013
			Copper	3.3 +01	ug/g	BBP013
			Dibromochloropropane	LT 5.0 -03	ug/g	BBK011
			Dibromochloropropane	LT 2. +00	ug/g	BBL006
			Dibromochloropropane	LT 3. -01	ug/g	BBM008
			Dicyclopentadiene	LT 7. -01	ug/g	BBL006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	9.5-10	Soil	Dicyclopentadiene	LT 1. +00	ug/g	BBM008
			Vapona	LT 3. +00	ug/g	BBM008
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BBM008
			Dithiane	LT 4. -01	ug/g	BBM008
			Dieldrin	LT 3. -01	ug/g	BBM008
			Dimethyldisulfide	LT 2. +01	ug/g	BBM006
			Endrin	LT 5. -01	ug/g	BBM008
			Ethylbenzene	LT 4. -01	ug/g	BBM006
			Mercury	LT 5.0 -02	ug/g	BBM013
			Hydrazine	LT 5. +01	ug/g	BBM008
			Isodrin	LT 3. -01	ug/g	BBM008
			Toluene	LT 3. -01	ug/g	BBM006
			Methylhydrazine	LT 2. +02	ug/g	BBM008
			Methylisobutyl Ketone	LT 7. -01	ug/g	BBM006
			Malathion	LT 7. -01	ug/g	BBM008
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BBM008
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BBM008
			1,4-Oxathiane	LT 3. -01	ug/g	BBM008
			Lead	1.6 +01	ug/g	BBM013
			Dichlorodiphenylethane	LT 6. -01	ug/g	BBM008
0002	14-15	Soil	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BBM008
			Parathion	LT 9. -01	ug/g	BBM008
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BBM008
			Tetrachloroethene	LT 3. -01	ug/g	BBM006
			Trichloroethene	LT 5. -01	ug/g	BBM006
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBM008
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BBM006
			Zinc	8.9 +01	ug/g	BBM013
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BBM007
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BBM007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

11/11/86

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 11, Site 1-7 Hydrizine Blending and Storage Facility

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	14-15	Soil	1,1-Dichloroethane	LT 2. +00	ug/g	88L007
			1,2-Dichloroethane	LT 2. +00	ug/g	88L007
			1,2-Dichloroethane	LT 6. -01	ug/g	88L007
			m-Xylene	LT 8. -01	ug/g	88L007
			Aldrin	LT 3. -01	ug/g	88M009
			Arsenic	LT 2.5 +00	ug/g	88M008
			Atrazine	LT 3. -01	ug/g	88M009
			Bicycloheptadiene	LT 4. -01	ug/g	88L007
			Benzene	LT 3. -01	ug/g	88L007
			Carbon Tetrachloride	LT 3. -01	ug/g	88L007
			Cadmium	LT 7.4 -01	ug/g	88P008
			Methylene Chloride	LT 2. +00	ug/g	88L007
			Chloroform	LT 3. -01	ug/g	88L007
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	88M009
			Chlorobenzene	LT 1. +00	ug/g	88L007
			Chlordane	LT 2. +00	ug/g	88M009
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	88M009
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	88M009
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	88M009
			Chromium	1.0 +01	ug/g	88P008
			Copper	4.3 +01	ug/g	88P008
			Dibromochloropropane	LT 5.0 -03	ug/g	88K012
			Dibromochloropropane	LT 2. +00	ug/g	88L007
			Dibromochloropropane	LT 3. -01	ug/g	88M009
			Dicycloheptadiene	LT 7. -01	ug/g	88L007
			Dicycloheptadiene	LT 1. +00	ug/g	88M009
			Vapona	LT 3. +00	ug/g	88M009
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	88M009
			Dithiane	LT 4. -01	ug/g	88M009
			Dieldrin	LT 3. -01	ug/g	88M009
			Dimethyldisulfide	LT 2. +01	ug/g	88L007
			Endrin	LT 5. -01	ug/g	88M009
			Ethylbenzene	LT 4. -01	ug/g	88L007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicycloheptadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	14-15	Soil	Mercury	LT 5.0	-02	BB0008
			Hydrazine	LT 5.	+01	BB2009
			Isodrin	LT 3.	-01	BBM009
			Toluene	LT 3.	-01	BBL007
			Methylhydrazine	LT 2.	+02	BBY009
			Methylisobutyl Ketone	LT 7.	-01	BBL007
			Malathion	LT 7.	-01	BBM009
			N-Nitrosodimethylamine	LT 2.6	-01	BCA009
			N-Nitrosodi-N-Propylamine	LT 1.0	-01	BCA009
			1,4-Oxathiane	LT 3.	-01	BBM009
			Lead	2.3	+01	BBP008
			Dichlorodiphenylethane	LT 6.	-01	BBM009
			Dichlorodiphenyltrichloroethane	LT 5.	-01	BBM009
			Parathion	LT 9.	-01	BBM009
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	BBM009
			Tetrachloroethene	LT 3.	-01	BBL007
			Trichloroethene	LT 5.	-01	BBL007
			Unsymmetrical Dimethyl Hydrazine	LT 2.	+02	BBX009
			Ortho- & Para-Xylene	LT 5.	+00	BBL007
			Zinc	1.1	+02	BBP008
0002	16.5-17.5	Soil	1,1,1-Trichloroethane	LT 4.	-01	BBL008
			1,1,2-Trichloroethane	LT 4.	-01	BBL008
			1,1-Dichloroethane	LT 2.	+00	BBL008
			1,2-Dichloroethane	LT 2.	+00	BBL008
			1,2-Dichloroethane	LT 6.	-01	BBL008
			m-Xylene	LT 8.	-01	BBL008
			Aldrin	LT 3.	-01	BBM010
			Arsenic	LT 2.5	+00	BBM009
			Atrazine	LT 3.	-01	BBM010
			Bicycloheptadiene	LT 4.	-01	BBL008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	16.5-17.5	Soil	Benzene	LT 3. -01	ug/g	BBL008
			Carbon Tetrachloride	LT 3. -01	ug/g	BBL008
			Cadmium	LT 7.4 -01	ug/g	BBP009
			Methylene Chloride	LT 2. +00	ug/g	BBL008
			Chloroform	LT 3. -01	ug/g	BBL008
			Hexachlorocyclopentadiene	LT 6. +00	ug/g	BBM010
			Chlorobenzene	LT 1. +00	ug/g	BBL008
			Chlordane	LT 2. +00	ug/g	BBM010
			p-Chlorophenylmethyl Sulfide	LT 9. +00	ug/g	BBM010
			p-Chlorophenylmethyl Sulfoxide	LT 3. +00	ug/g	BBM010
			p-Chlorophenylmethyl Sulfone	LT 3. +00	ug/g	BBM010
			Chromium	LT 6.5 +00	ug/g	BBP009
			Copper	LT 4.9 +01	ug/g	BBP009
			Dibromochloropropane	LT 5.0 -03	ug/g	BBK013
			Dibromochloropropane	LT 2. +00	ug/g	BBL008
			Dibromochloropropane	LT 3. -01	ug/g	BBM010
			Dicyclopentadiene	LT 7. -01	ug/g	BBL008
			Dicyclopentadiene	LT 1. +00	ug/g	BBM010
			Vapone	LT 3. +00	ug/g	BBM010
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BBM010
			Dithiane	LT 4. -01	ug/g	BBM010
			Dieldrin	LT 3. +00	ug/g	BBM010
			Dimethyldisulfide	LT 2. +01	ug/g	BBL008
			Endrin	LT 5. +00	ug/g	BBM010
			Ethylbenzene	LT 4. -01	ug/g	BBL008
			Mercury	LT 5.0 -02	ug/g	BB0009
			Hydrazine	LT 5. +01	ug/g	BBZ010
			Isodrin	LT 3. -01	ug/g	BBM010
			Toluene	LT 3. -01	ug/g	BBL008
			Methylhydrazine	LT 2. +02	ug/g	BBY010
			Methylisobutyl Ketone	LT 7. -01	ug/g	BBL008
			Malathion	LT 7. -01	ug/g	BBM010
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA010
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA010

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0002	16.5-17.5	Soil	1,4-Oxathiane	LT 3. -01	ug/g	BBMD10
			Lead	3.1 +01	ug/g	BBP009
			Dichlorodiphenylethane	LT 6. +00	ug/g	BBMD10
			Dichlorodiphenyltrichloro-ethane	LT 5. +00	ug/g	BBMD10
			Parathion	LT 9. -01	ug/g	BBMD10
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BBMD10
			Tetrachloroethene	LT 3. -01	ug/g	BBL008
			Trichloroethene	LT 5. -01	ug/g	BBL008
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBX010
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BBL008
0003	0-1	Soil	Zinc	1.0 +02	ug/g	BBP009
			Aldrin	LT 3. -01	ug/g	BCS002
			Arsenic	LT 2.5 +00	ug/g	BBN021
			Atrazine	LT 3. -01	ug/g	BCS002
			Cadmium	LT 7.4 -01	ug/g	BCX005
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS002
			Chlordane	LT 2. +00	ug/g	BCS002
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS002
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS002
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS002
			Chromium	2.0 +01	ug/g	BCX005
			Copper	1.6 +01	ug/g	BCX005
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR005
			Dibromochloropropane	LT 3. -01	ug/g	BCS002
			Dicyclopentadiene	LT 1. +00	ug/g	BCS002
			Vapona	LT 3. +00	ug/g	BCS002
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS002
			Dithiane	LT 4. -01	ug/g	BCS002
			Dieldrin	LT 3. -01	ug/g	BCS002
			Endrin	LT 5. -01	ug/g	BCS002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0003	0-1	Soil	Mercury	LT 5.0 -02	ug/g	BCY005
			Hydrazine	LT 5. +01	ug/g	BC0005
			Isodrin	LT 3. -01	ug/g	BCS002
			Methylhydrazine	LT 2. +02	ug/g	BCP005
			Malathion	LT 7. -01	ug/g	BCS002
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN005
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN005
			1,4-Oxethane	LT 3. -01	ug/g	BCS002
			Lead	1.5 +01	ug/g	BCX005
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCS002
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCS002
			Parathion	LT 9. -01	ug/g	BCS002
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BCS002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BC0005
0003	4-5	Soil	Zinc	6.3 +01	ug/g	BCX005
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BCY002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BCY002
			1,1-Dichloroethane	LT 2. +00	ug/g	BCY002
			1,2-Dichloroethane	LT 2. +00	ug/g	BCY002
			1,2-Dichloroethane	LT 6. -01	ug/g	BCY002
			m-Xylene	LT 8. -01	ug/g	BCY002
			Aldrin	LT 3. -01	ug/g	BCS003
			Arsenic	LT 3.2 +00	ug/g	BBN022
			Atrazine	LT 3. -01	ug/g	BCS003
			Bicycloheptadiene	LT 4. -01	ug/g	BCY002
			Benzene	LT 3. -01	ug/g	BCY002
			Carbon Tetrachloride	LT 3. -01	ug/g	BCY002
			Cadmium	LT 7.4 -01	ug/g	BCX006
			Methylene Chloride	LT 2. +00	ug/g	BCY002
			Chloroform	LT 3. -01	ug/g	BCY002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0003	4-5	Soil	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS003
			Chlorobenzene	LT 1. +00	ug/g	BCI002
			Chlordane	LT 2. +00	ug/g	BCS003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS003
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS003
			Chromium	LT 1.9 +01	ug/g	BCX006
			Copper	LT 1.3 +01	ug/g	BCX006
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR006
			Dibromochloropropane	LT 3. -01	ug/g	BCS003
			Dibromochloropropane	LT 2. +00	ug/g	BCI002
			Dicyclopentadiene	LT 1. +00	ug/g	BCS003
			Dicyclopentadiene	LT 7. -01	ug/g	BCI002
			Vapona	LT 3. +00	ug/g	BCS003
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS003
			Dithiene	LT 4. -01	ug/g	BCS003
			Dieldrin	LT 3. -01	ug/g	BCS003
			Dimethyldisulfide	LT 2. +01	ug/g	BCI002
			Endrin	LT 5. -01	ug/g	BCS003
			Ethylbenzene	LT 4. -01	ug/g	BCI002
			Mercury	LT 5.0 -02	ug/g	BCY006
			Hydrazine	LT 5. +01	ug/g	BCG006
			Isodrin	LT 3. -01	ug/g	BCS003
			Toluene	LT 3. -01	ug/g	BCI002
			Methylhydrazine	LT 2. +02	ug/g	BCP006
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCI002
			Malathion	LT 7. -01	ug/g	BCS003
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN006
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN006
			1,4-Oxathiane	LT 3. -01	ug/g	BCS003
			Lead	LT 8.4 +00	ug/g	BCX006
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCS003
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCS003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0003	4-5	Soil	Parathion	LT 9. -01	ug/g	BCS003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BCS003
			Tetrachloroethene	LT 3. -01	ug/g	BCI002
			Trichloroethene	LT 5. -01	ug/g	BCI002
			Unsymmetrical Dimethyl Hydrizine	LT 2. +02	ug/g	BC0006
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BCI002
			Zinc	5.6 +01	ug/g	BCX006
0004	0-1	Soil	Aldrin	LT 3. -01	ug/g	BCS004
			Arsenic	LT 2.5 +00	ug/g	BBN023
			Atrazine	LT 3. -01	ug/g	BCS004
			Cadmium	LT 7.4 -01	ug/g	BCX007
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS004
			Chlordane	LT 2. +00	ug/g	BCS004
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS004
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS004
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS004
			Chromium	LT 6.5 +00	ug/g	BCX007
			Copper	6.5 +00	ug/g	BCX007
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR007
			Dibromochloropropane	LT 3. -01	ug/g	BCS004
			Dicyclopentadiene	LT 1. +00	ug/g	BCS004
			Vapone	LT 3. +00	ug/g	BCS004
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS004
			Dithiane	LT 4. -01	ug/g	BCS004
			Dieldrin	LT 3. -01	ug/g	BCS004
			Endrin	LT 5. -01	ug/g	BCS004
			Mercury	LT 5.0 -02	ug/g	BCY007
			Hydrizine	LT 5. +01	ug/g	BC0007
			Isodrin	LT 3. -01	ug/g	BCS004
			Methylhydrizine	LT 2. +02	ug/g	BCP010
			Malathion	LT 7. -01	ug/g	BCS004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	0-1	Soil	N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN007
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN007
			1,4-Oxathiane	LT 3. -01	ug/g	BCS004
			Lead	LT 8.4 +00	ug/g	BCX007
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCS004
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCS004
			Parathion	LT 9. -01	ug/g	BCS004
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BCS004
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BC0007
			Zinc	2.0 +01	ug/g	BCX007
0004	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BCT003
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BCT003
			1,1-Dichloroethane	LT 2. +00	ug/g	BCT003
			1,2-Dichloroethane	LT 2. +00	ug/g	BCT003
			1,2-Dichloroethane	LT 6. -01	ug/g	BCT003
			m-Xylene	LT 8. -01	ug/g	BCT003
			Aldrin	LT 3. -01	ug/g	BCS005
			Arsenic	LT 2.5 +00	ug/g	BBND24
			Atrazine	LT 3. -01	ug/g	BCS005
			Bicycloheptadiene	LT 4. -01	ug/g	BCT003
			Benzene	LT 3. -01	ug/g	BCT003
			Carbon Tetrachloride	LT 3. -01	ug/g	BCT003
			Cadmium	LT 7.4 -01	ug/g	BCX008
			Methylene Chloride	LT 2. +00	ug/g	BCT003
			Chloroform	LT 3. -01	ug/g	BCT003
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS005
			Chlorobenzene	LT 1. +00	ug/g	BCT003
			Chlordane	LT 2. +00	ug/g	BCS005
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS005
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	4-5	Soil	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS005
			Chromium	1.5 +01	ug/g	BCX008
			Copper	8.2 +00	ug/g	BCX008
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR008
			Dibromochloropropane	LT 3. -01	ug/g	BCS005
			Dibromochloropropane	LT 2. +00	ug/g	BCY003
			Dicyclopentadiene	LT 1. +00	ug/g	BCS005
			Dicyclopentadiene	LT 7. -01	ug/g	BCY003
			Vapors	LT 3. +00	ug/g	BCS005
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS005
			Dithiane	LT 4. -01	ug/g	BCS005
			Dieldrin	LT 3. -01	ug/g	BCS005
			Dimethyldisulfide	LT 2. +01	ug/g	BCY003
			Endrin	LT 5. -01	ug/g	BCS005
			Ethylbenzene	LT 4. -01	ug/g	BCY003
			Mercury	LT 5.0 -02	ug/g	BCY008
			Hydrazine	LT 5. +01	ug/g	BCY008
			Isodrin	LT 3. -01	ug/g	BCS005
			Toluene	LT 3. -01	ug/g	BCY003
			Methylhydrazine	LT 2. +02	ug/g	BCP011
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCY003
			Malathion	LT 7. -01	ug/g	BCS005
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN008
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN008
			1,4-Oxathiane	LT 3. -01	ug/g	BCS005
			Lead	LT 8.4 +00	ug/g	BCX008
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCS005
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCS005
			Parathion	LT 9. -01	ug/g	BCS005
			2-Chloro-1(2,4-Dichlorophenyl) Vinyllethyl Phosphates	LT 6. -01	ug/g	BCS005
			Tetrachloroethene	LT 3. -01	ug/g	BCY003
			Trichloroethene	LT 5. -01	ug/g	BCY003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	4-5	Soil	Unsymmetrical Dimethyl Hydrizine	LT 2. +02	ug/g	BC0008
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BC1003
			Zinc	3.8 +01	ug/g	BCX008
0004	9-10	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BC1004
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BC1004
			1,1-Dichloroethane	LT 2. +00	ug/g	BC1004
			1,2-Dichloroethane	LT 2. +00	ug/g	BC1004
			1,2-Dichloroethane	LT 6. -01	ug/g	BC1004
			m-Xylene	LT 8. -01	ug/g	BC1004
			Aldrin	LT 3. -01	ug/g	BCS006
			Arsenic	LT 2.5 +00	ug/g	BDC008
			Atrazine	LT 3. -01	ug/g	BCS006
			Bicycloheptadiene	LT 4. -01	ug/g	BC1004
			Benzene	LT 3. -01	ug/g	BC1004
			Carbon Tetrachloride	LT 3. -01	ug/g	BC1004
			Cadmium	LT 7.4 -01	ug/g	BCX009
			Methylene Chloride	LT 2. +00	ug/g	BC1004
			Chloroform	LT 3. -01	ug/g	BC1004
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS006
			Chlorobenzene	LT 1. +00	ug/g	BC1004
			Chlordane	LT 2. +00	ug/g	BCS006
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS006
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS006
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS006
			Chromium	1.4 +01	ug/g	BCX009
			Copper	1.0 +01	ug/g	BCX009
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR009
			Dibromochloropropane	LT 3. -01	ug/g	BCS006
			Dibromochloropropane	LT 2. +00	ug/g	BC1004
			Dicyclopentadiene	LT 1. +00	ug/g	BCS006
			Dicyclopentadiene	LT 7. -01	ug/g	BC1004
			Vapona	LT 3. +00	ug/g	BCS006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	9-10	Soil	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS006
			Dithiane	LT 4. -01	ug/g	BCS006
			Dieldrin	LT 3. -01	ug/g	BCS006
			Dimethyldisulfide	LT 2. +01	ug/g	BC1004
			Endrin	LT 5. -01	ug/g	BCS006
			Ethylbenzene	LT 4. -01	ug/g	BC1004
			Mercury	LT 5.0 -02	ug/g	BCY009
			Hydrazine	LT 5. +01	ug/g	BCQ009
			Isodrin	LT 3. -01	ug/g	BCS006
			Toluene	LT 3. -01	ug/g	BC1004
			Methylhydrazine	LT 2. +02	ug/g	BCP012
			Methylisobutyl Ketone	LT 7. -01	ug/g	BC1004
			Malathion	LT 7. -01	ug/g	BCS006
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN009
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN009
			1,4-Oxathiane	LT 3. -01	ug/g	BCS006
			Lead	LT 8.4 +00	ug/g	BCX009
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCS006
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCS006
			Parathion	LT 9. -01	ug/g	BCS006
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BCS006
			Tetrachloroethene	LT 3. -01	ug/g	BC1004
			Trichloroethene	LT 5. -01	ug/g	BC1004
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BCQ009
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BC1004
			Zinc	4.1 +01	ug/g	BCX009
0004	14-15	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BC1005
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BC1005
			1,1-Dichloroethane	LT 2. +00	ug/g	BC1005
			1,2-Dichloroethane	LT 2. +00	ug/g	BC1005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	14-15	Soil	1,2-Dichloroethane	LT 6. -01	ug/g	BC0005
			m-Xylene	LT 8. -01	ug/g	BC0005
			Aldrin	LT 3. -01	ug/g	BCS007
			Arsenic	LT 2.5 +00	ug/g	BC0009
			Atrazine	LT 3. -01	ug/g	BCS007
			Bicycloheptadiene	LT 4. -01	ug/g	BC0005
			Benzene	LT 3. -01	ug/g	BC0005
			Carbon Tetrachloride	LT 3. -01	ug/g	BC0005
			Methylene Chloride	LT 2. +00	ug/g	BC0005
			Chloroform	LT 3. -01	ug/g	BC0005
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS007
			Chlorobenzene	LT 1. +00	ug/g	BC0005
			Chloro-dane	LT 2. +00	ug/g	BCS007
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS007
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS007
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS007
			Chromium	LT 6.5 +00	ug/g	BCX010
			Copper	4.3 +01	ug/g	BCX010
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR010
			Dibromochloropropane	LT 3. -01	ug/g	BCS007
			Dibromochloropropane	LT 2. +00	ug/g	BC0005
			Dicyclopentadiene	LT 1. +00	ug/g	BCS007
			Dicyclopentadiene	LT 7. -01	ug/g	BC0005
			Vapona	LT 3. +00	ug/g	BCS007
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS007
			Dithiane	LT 4. -01	ug/g	BCS007
			Dieldrin	LT 3. -01	ug/g	BCS007
			Dimethyldisulfide	LT 2. +01	ug/g	BC0005
			Endrin	LT 5. -01	ug/g	BCS007
			Ethylbenzene	LT 4. -01	ug/g	BC0005
			Mercury	LT 5.0 -02	ug/g	BCY010
			Hydrazine	LT 5. +01	ug/g	BC0010
			Isodrin	LT 3. -01	ug/g	BCS007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	14-15	Soil	Toluene	LT 3.	-01	BC1005
			Methylhydrazine	LT 2.	+02	BCP013
			Methylisobutyl Ketone	LT 7.	-01	BC1005
			Malathion	LT 7.	-01	BC9007
			N-Nitrosodimethylamine	LT 2.6	-01	BCND10
			N-Nitrosodi-N-Propylamine	LT 1.0	-01	BCND10
			1,4-Oxathiane	LT 3.	-01	BC9007
			Lead	LT 8.4	+00	BCX010
			Dichlorodiphenylethane	LT 6.	-01	BC9007
			Dichlorodiphenyltrichloroethane	LT 5.	-01	BC9007
			Parathion	LT 9.	-01	BC9007
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	BC9007
			Tetrachloroethene	LT 3.	-01	BC1005
			Trichloroethene	LT 5.	-01	BC1005
			Unsymmetrical Dimethyl Hydrazine	LT 2.	+02	BC0010
			Ortho- & Para-Xylene	LT 5.	+00	BC1005
			Zinc	1.0	+02	BCX010
	19-20	Soil	1,1,1-Trichloroethane	LT 4.	-01	BC1006
			1,1,2-Trichloroethane	LT 4.	-01	BC1006
			1,1-Dichloroethane	LT 2.	+00	BC1006
			1,2-Dichloroethane	LT 2.	+00	BC1006
			1,2-Dichloroethane	LT 6.	-01	BC1006
			m-Xylene	LT 8.	-01	BC1006
			Aldrin	LT 3.	-01	BCS008
			Arsenic	LT 2.5	+00	BC0010
			Atrazine	LT 3.	-01	BCS008
			Bicycloheptadiene	LT 4.	-01	BC1006
			Benzene	LT 3.	-01	BC1006
			Carbon Tetrachloride	LT 3.	-01	BC1006
			Cadmium	LT 7.4	-01	BCX011
			Methylene Chloride	LT 2.	+00	BC1006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	19-20	Soil	Chloroform	LT 3. -01	ug/g	BC1006
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS008
			Chlorobenzene	LT 1. +00	ug/g	BC1006
			Chlordane	LT 2. +00	ug/g	BCS008
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS008
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS008
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS008
			Chromium	LT 6.5 +00	ug/g	BCX011
			Copper	4.7 +01	ug/g	BCX011
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR011
			Dibromochloropropane	LT 3. -01	ug/g	BCS008
			Dibromochloropropane	LT 2. +00	ug/g	BC1006
			Dicyclopentadiene	LT 1. +00	ug/g	BCS008
			Dicyclopentadiene	LT 7. -01	ug/g	BC1006
			Vapone	LT 3. +00	ug/g	BCS008
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS008
			Dithiane	LT 4. -01	ug/g	BCS008
			Dieldrin	LT 3. -01	ug/g	BCS008
			Dimethyldisulfide	LT 2. +01	ug/g	BC1006
			Endrin	LT 5. -01	ug/g	BCS008
			Ethylbenzene	LT 4. -01	ug/g	BC1006
			Mercury	LT 5.0 -02	ug/g	BCY011
			Hydrazine	LT 5. +01	ug/g	BCQ011
			Isodrin	LT 3. -01	ug/g	BCS008
			Toluene	LT 3. -01	ug/g	BC1006
			Methylhydrazine	LT 2. +02	ug/g	BCP014
			Methylisobutyl Ketone	LT 7. -01	ug/g	BC1006
			Malethion	LT 7. -01	ug/g	BCS008
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN011
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN011
			1,4-Oxathiane	LT 3. -01	ug/g	BCS008
			Lead	LT 8.4 +00	ug/g	BCX011
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCS008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	19-20	Soil	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCS008
			Parathion	LT 9. -01	ug/g	BCS008
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BCS008
			Tetrachloroethene	LT 3. -01	ug/g	BCI006
			Trichloroethene	LT 5. -01	ug/g	BCI006
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BC0011
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BCI006
			Zinc	1.1 +02	ug/g	BCX011
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BCI006
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BCI006
0004	24-25	Soil	1,1-Dichloroethane	LT 2. +00	ug/g	BCI006
			1,2-Dichloroethane	LT 2. +00	ug/g	BCI006
			1,2-Dichloroethane	LT 6. -01	ug/g	BCI006
			m-Xylene	LT 8. -01	ug/g	BCI007
			Aldrin	LT 3. -01	ug/g	BCS009
			Arsenic	LT 2.5 +00	ug/g	BC0011
			Atrazine	LT 3. -01	ug/g	BCS009
			Bicycloheptadiene	LT 4. -01	ug/g	BCI006
			Benzene	LT 3. -01	ug/g	BCI006
			Carbon Tetrachloride	LT 3. -01	ug/g	BCI006
			Cadmium	LT 7.4 -01	ug/g	BCX012
			Methylene Chloride	LT 2. +00	ug/g	BCI006
			Chloroform	LT 3. -01	ug/g	BCI006
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS009
			Chlorobenzene	LT 1. +00	ug/g	BCI006
			Chlordane	LT 2. +00	ug/g	BCS009
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS009
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS009
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS009
			Chromium	1.1 +01	ug/g	BCX012

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0004	24-25	Soil	Copper	4.6 +01	ug/g	BCX012
			Dibromochloropropane	LT 5.0 -03	ug/g	BCR012
			Dibromochloropropane	LT 3. -01	ug/g	BCS009
			Dibromochloropropane	LT 2. +00	ug/g	BCI007
			Dicyclopentadiene	LT 1. +00	ug/g	BCS009
			Dicyclopentadiene	LT 7. -01	ug/g	BCI006
			Vapors	LT 3. +00	ug/g	BCS009
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS009
			Dithiane	LT 4. -01	ug/g	BCS009
			Diethrin	LT 3. -01	ug/g	BCS009
			Dimethyldisulfide	LT 2. +01	ug/g	BCI006
			Endrin	LT 5. -01	ug/g	BCS009
			Ethylbenzene	LT 4. -01	ug/g	BCI007
			Mercury	LT 5.0 -02	ug/g	BCY012
			Hydrazine	LT 5. +01	ug/g	BC0012
			Isodrin	LT 3. -01	ug/g	BCS009
			Toluene	LT 3. -01	ug/g	BCI006
			Methylhydrazine	LT 2. +02	ug/g	BCP015
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCI006
			Malathion	LT 7. -01	ug/g	BCS009
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN012
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN012
			1,4-Oxathiane	LT 3. -01	ug/g	BCS009
			Lead	LT 8.4 +00	ug/g	BCX012
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCS009
			Dichlorodiphenyltrichloroethene	LT 5. -01	ug/g	BCS009
			Parathion	LT 9. -01	ug/g	BCS009
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BCS009
			Tetrachloroethene	LT 3. -01	ug/g	BCI006
			Trichloroethene	LT 5. -01	ug/g	BCI006
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BC0012

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0005	0-1	Soil	Parathion	LT 9.	-01	BCD004
			2-Chloro-1(2,4-Dichlorophenyl)	LT 6.	-01	BCD004
			Vinylidene Phosphates			
			Unsymmetrical Dimethyl	LT 2.	+02	BBX013
			Hydrazine			
0005	4-5	Soil	Zinc	4.8	+01	BBP016
			1,1,1-Trichloroethane	LT 4.	-01	BCE003
			1,1,2-Trichloroethane	LT 4.	-01	BCE003
			1,1-Dichloroethane	LT 2.	+00	BCE003
			1,2-Dichloroethane	LT 2.	+00	BCE003
			1,2-Dichloroethane	LT 6.	-01	BCE003
			m-Xylene	LT 8.	-01	BCE003
			Aldrin	LT 3.	-01	BCD005
			Arsenic	LT 2.5	+00	BBN017
			Atrazine	LT 3.	-01	BCD005
			Bicycloheptadiene	LT 4.	-01	BCE003
			Benzene	LT 3.	-01	BCE003
			Carbon Tetrachloride	LT 3.	-01	BCE003
			Cadmium	LT 7.4	-01	BBP017
			Methylene Chloride	LT 2.	+00	BCE003
			Chloroform	LT 3.	-01	BCE003
			Hexachlorocyclopentadiene	LT 6.	-01	BCD005
			Chlorobenzene	LT 1.	+00	BCE003
			Chlordane	LT 2.	+00	BCD005
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	BCD005
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	BCD005
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	BCD005
			Chromium	1.3	+01	BBP017
			Copper	8.0	+00	BBP017
			Dibromochloropropane	LT 5.0	-03	BCC008
			Dibromochloropropane	LT 3.	-01	BCD005
			Dibromochloropropane	LT 2.	+00	BCE003
			Dicyclopentadiene	LT 1.	+00	BCD005
			Dicyclopentadiene	LT 7.	-01	BCE003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0005	4-5	Soil	Vapona	LT 3. +00	ug/g	BCD005
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCD005
			Dithiane	LT 4. -01	ug/g	BCD005
			Dieldrin	LT 3. -01	ug/g	BCD005
			Dimethyldisulfide	LT 2. +01	ug/g	BCD003
			Endrin	LT 5. -01	ug/g	BCD005
			Ethylbenzene	LT 4. -01	ug/g	BCD003
			Mercury	LT 5.0 -02	ug/g	BB0017
			Hydrazine	LT 5. +01	ug/g	BB2014
			Isodrin	LT 3. -01	ug/g	BCD005
			Toluene	LT 3. -01	ug/g	BCE003
			Methylhydrazine	LT 2. +02	ug/g	BBY014
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCE003
			Malathion	LT 7. -01	ug/g	BCD005
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA014
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA014
			1,4-Oxathiane	LT 3. -01	ug/g	BCD005
			Lead	LT 8.4 +00	ug/g	BBP017
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCD005
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BCD005
0006	0-1	Soil	Parathion	LT 9. -01	ug/g	BCD005
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BCD005
			Tetrachloroethene	LT 3. -01	ug/g	BCE003
			Trichloroethene	LT 5. -01	ug/g	BCE003
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBX014
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BCE003
			Zinc	3.3 +01	ug/g	BBP017
			Aldrin	LT 3. -01	ug/g	BCD002
			Arsenic	LT 2.5 +00	ug/g	BBN014
			Atrazine	LT 3. -01	ug/g	BCD002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

11/11/86

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0006	0-1	Soil	Cadmium	LT 7.4 -01	ug/g	BBP014
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCD002
			Chlordane	LT 2. +00	ug/g	BCD002
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCD002
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCD002
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCD002
			Chromium	2.0 +01	ug/g	BBP014
			Copper	1.1 +01	ug/g	BBP014
			Dibromochloropropane	LT 5.0 -03	ug/g	BCC005
			Dibromochloropropane	LT 3. -01	ug/g	BCD002
			Dicyclopentadiene	LT 1. +00	ug/g	BCD002
			Vapone	LT 3. +00	ug/g	BCD002
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCD002
			Dithiane	LT 4. -01	ug/g	BCD002
			Dieldrin	LT 3. -01	ug/g	BCD002
			Endrin	LT 5. -01	ug/g	BCD002
			Mercury	LT 5.0 -02	ug/g	BB0014
			Hydrazine	LT 5. +01	ug/g	BB2011
			Isodrin	LT 3. -01	ug/g	BCD002
			Methylhydrazine	LT 2. +02	ug/g	BBY011
			Malethion	LT 7. -01	ug/g	BCD002
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA011
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA011
			1,4-Oxathiane	LT 3. -01	ug/g	BCD002
			Lead	1.3 +01	ug/g	BBP014
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCD002
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCD002
			Parathion	LT 9. -01	ug/g	BCD002
			2-Chloro-1(2,4-Dichlorophenyl)	LT 6. -01	ug/g	BCD002
			Vinylidethyl Phosphates	LT 2. +02	ug/g	BBX011
			Unsymmetrical Dimethyl	4.3 +01	ug/g	BBP014
			Hydrazine			
			Zinc			

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0006	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BCE002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BCE002
			1,1-Dichloroethane	LT 2. +00	ug/g	BCE002
			1,2-Dichloroethane	LT 2. +00	ug/g	BCE002
			1,2-Dichloroethane	LT 6. -01	ug/g	BCE002
			m-Xylene	LT 8. -01	ug/g	BCE002
			Aldrin	LT 3. -01	ug/g	BCD003
			Arsenic	LT 2.5 +00	ug/g	BBND15
			Atrazine	LT 3. -01	ug/g	BCD003
			Bicycloheptadiene	LT 4. -01	ug/g	BCE002
			Benzene	LT 3. -01	ug/g	BCE002
			Carbon Tetrachloride	LT 3. -01	ug/g	BCE002
			Cadmium	LT 7.4 -01	ug/g	BBP015
			Methylene Chloride	LT 2. +00	ug/g	BCE002
			Chloroform	LT 3. -01	ug/g	BCE002
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCD003
			Chlorobenzene	LT 1. +00	ug/g	BCE002
			Chlordane	LT 2. +00	ug/g	BCD003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCD003
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCD003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCD003
			Chromium	1.8 +01	ug/g	BBP015
			Copper	1.4 +01	ug/g	BBP015
			Dibromochloropropane	LT 5.0 -03	ug/g	BCC006
			Dibromochloropropane	LT 3. -01	ug/g	BCD003
			Dibromochloropropane	LT 2. +00	ug/g	BCE002
			Dicyclopentadiene	LT 1. +00	ug/g	BCD003
			Dicyclopentadiene	LT 7. -01	ug/g	BCE002
			Vapona	LT 3. +00	ug/g	BCD003
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCD003
			Dithiane	LT 4. -01	ug/g	BCD003
			Dieldrin	LT 3. -01	ug/g	BCD003
			Dimethyldisulfide	LT 2. +01	ug/g	BCE002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0006	4-5	Soil	Endrin	LT 5. -01	ug/g	BCD003
			Ethylbenzene	LT 4. -01	ug/g	BCE002
			Mercury	LT 5.0 -02	ug/g	BB0015
			Hydrazine	LT 5. +01	ug/g	BBZ012
			Isodrin	LT 3. -01	ug/g	BCD003
			Toluene	LT 3. -01	ug/g	BCE002
			Methylhydrazine	LT 2. +02	ug/g	BBY012
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCE002
			Methion	LT 7. -01	ug/g	BCD003
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA012
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA012
			1,4-Oxathiane	LT 3. -01	ug/g	BCD003
			Lead	LT 8.4 +00	ug/g	BBP015
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCD003
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BCD003
			Parathion	LT 9. -01	ug/g	BCD003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BCD003
			Tetrachloroethene	LT 3. -01	ug/g	BCE002
			Trichloroethene	LT 5. -01	ug/g	BCE002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBX012
0007	0-1	Soil	Ortho- & Para-Xylene	LT 5. +00	ug/g	BCE002
			Zinc	6.0 +01	ug/g	BBP015
			Aldrin	LT 3. -01	ug/g	BCD006
			Arsenic	LT 2.5 +00	ug/g	BBN018
			Atrazine	LT 3. -01	ug/g	BCD006
			Cadmium	LT 7.4 -01	ug/g	BBP018
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCD006
			Chlordane	LT 2. +00	ug/g	BCD006
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCD006
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCD006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	0-1	Soil	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCD006
			Chromium	1.1 +01	ug/g	BBP018
0007	4-5	Soil	Copper	1.0 +01	ug/g	BBP018
			Dibromochloropropane	LT 5.0 -03	ug/g	BCD009
			Dibromochloropropane	LT 3. -01	ug/g	BCD006
			Dicyclopentadiene	LT 1. +00	ug/g	BCD006
			Vapone	LT 3. +00	ug/g	BCD006
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCD006
			Dithiane	LT 4. -01	ug/g	BCD006
			Dieldrin	LT 3. -01	ug/g	BCD006
			Endrin	LT 5. -01	ug/g	BCD006
			Mercury	LT 5.0 -02	ug/g	BB0018
			Hydrazine	LT 5. +01	ug/g	BBZ015
			Isodrin	LT 3. -01	ug/g	BCD006
			Methylhydrazine	LT 2. +02	ug/g	BBV015
			Malethion	LT 7. -01	ug/g	BCD006
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA015
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA015
0007	4-5	Soil	1,4-Oxathiane	LT 3. -01	ug/g	BCD006
			Lead	1.2 +02	ug/g	BBP018
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCD006
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCD006
			Parathion	LT 9. -01	ug/g	BCD006
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BCD006
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBX015
			Zinc	3.8 +01	ug/g	BBP018
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BCE004
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BCE004
			1,1-Dichloroethane	LT 2. +00	ug/g	BCE004
			1,2-Dichloroethane	LT 2. +00	ug/g	BCE004
			1,2-Dichloroethane	LT 6. -01	ug/g	BCE004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	4-5	Soil	m-Xylene	LT 8.	-01	BCE004
			Aldrin	LT 3.	-01	BCD007
			Arsenic	LT 2.5	+00	BBN019
			Atrazine	LT 3.	-01	BCD007
			Bicycloheptadiene	LT 4.	-01	BCE004
			Benzene	LT 3.	-01	BCE004
			Carbon Tetrachloride	LT 3.	-01	BCE004
			Cadmium	LT 7.4	-01	BBP019
			Methylene Chloride	LT 2.	+00	BCE004
			Chloroform	LT 3.	-01	BCE004
			Hexachlorocyclopentadiene	LT 6.	-01	BCD007
			Chlorobenzene	LT 1.	+00	BCE004
			Chlordane	LT 2.	+00	BCD007
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	BCD007
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	BCD007
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	BCD007
			Chromium	LT 8.6	+00	BBP019
			Copper	LT 4.7	+00	BBP019
			Dibromochloropropane	LT 5.0	-03	BCC010
			Dibromochloropropane	LT 3.	-01	BCD007
			Dibromochloropropane	LT 2.	+00	BCE004
			Dicyclopentadiene	LT 1.	+00	BCD007
			Dicyclopentadiene	LT 7.	-01	BCE004
			Vapona	LT 3.	+00	BCD007
			Diisopropylmethyl Phosphonate	LT 1.	+00	BCD007
			Dithiane	LT 4.	-01	BCD007
			Dieldrin	LT 3.	-01	BCD007
			Dimethyldisulfide	LT 2.	+01	BCE004
			Endrin	LT 5.	-01	BCD007
			Ethylbenzene	LT 4.	-01	BCE004
			Mercury	LT 5.0	-02	BBN019
			Hydrazine	LT 5.	+01	BBZ016
			Isodrin	LT 3.	-01	BCD007
			Toluene	LT 3.	-01	BCE004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	4-5	Soil	Methylhydrazine	LT 2. +02	ug/g	BSY016
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCE004
			Malethion	LT 7. -01	ug/g	BCD007
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA016
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA016
			1,4-Oxathiane	LT 3. -01	ug/g	BCD007
			Lead	LT 8.4 +00	ug/g	BBP019
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCD007
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCD007
			Parathion	LT 9. -01	ug/g	BCD007
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BCD007
			Tetrachloroethene	LT 3. -01	ug/g	BCE004
			Trichloroethene	LT 5. -01	ug/g	BCE004
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBX016
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BCE004
			Zinc	LT 2.4 +01	ug/g	BBP019
0007	9-10	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BCE005
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BCE005
			1,1-Dichloroethane	LT 2. +00	ug/g	BCE005
			1,2-Dichloroethane	LT 2. +00	ug/g	BCE005
			1,2-Dichloroethane	LT 6. -01	ug/g	BCE005
			m-Xylene	LT 8. -01	ug/g	BCE005
			Aldrin	LT 3. -01	ug/g	BCD008
			Arsenic	LT 2.5 +00	ug/g	BBND20
			Atrazine	LT 3. -01	ug/g	BCD008
			Bicycloheptadiene	LT 4. -01	ug/g	BCE005
			Benzene	LT 3. -01	ug/g	BCE005
			Carbon Tetrachloride	LT 3. -01	ug/g	BCE005
			Cadmium	LT 7.4 -01	ug/g	BBPD20
			Methylene Chloride	LT 2. +00	ug/g	BCE005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	9-10	Soil	Chloroform	LT 3. -01	ug/g	BCE005
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCD008
			Chlorobenzene	LT 1. +00	ug/g	BCE005
			Chlordane	LT 2. +00	ug/g	BCD008
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCD008
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCD008
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCD008
			Chromium	1.2 +01	ug/g	BBP020
			Copper	4.0 +01	ug/g	BBP020
			Dibromochloropropane	LT 5.0 -03	ug/g	BCC011
			Dibromochloropropane	LT 3. -01	ug/g	BCD008
			Dibromochloropropane	LT 2. +00	ug/g	BCE005
			Dicyclopentadiene	LT 1. +00	ug/g	BCD008
			Dicyclopentadiene	LT 7. -01	ug/g	BCE005
			Vapona	LT 3. +00	ug/g	BCD008
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCD008
			Dithiane	LT 4. -01	ug/g	BCD008
			Dieldrin	LT 3. -01	ug/g	BCD008
			Dimethyldisulfide	LT 2. +01	ug/g	BCE005
			Endrin	LT 5. -01	ug/g	BCD008
			Ethylbenzene	LT 4. -01	ug/g	BCE005
			Mercury	LT 5.0 -02	ug/g	BB0020
			Hydrazine	LT 5. +01	ug/g	BB2017
			Isodrin	LT 3. -01	ug/g	BCD008
			Toluene	LT 3. -01	ug/g	BCE005
			Methylhydrazine	LT 2. +02	ug/g	BBY017
			Methylisobutyl Ketone	LT 7. -01	ug/g	BCE005
			Malathion	LT 7. -01	ug/g	BCD008
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA017
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA017
			1,4-Oxathiane	LT 3. -01	ug/g	BCD008
			Lead	2.2 +01	ug/g	BBP020
			Dichlorodiphenylethane	LT 6. -01	ug/g	BCD008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0007	9-10	Soil	Dichlorodibenzyltrichloroethane	LT 5. -01	ug/g	BCD008
			Parathion	LT 9. -01	ug/g	BCD008
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BCD008
			Tetrachloroethene	LT 3. -01	ug/g	BCE005
			Trichloroethene	LT 5. -01	ug/g	BCE005
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBX017
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BCE005
			Zinc	9.8 +01	ug/g	BBP020
0008	0-1	Soil	Aldrin	LT 3. -01	ug/g	BBM002
			Arsenic	3.1 +00	ug/g	BBN005
			Atrazine	LT 3. -01	ug/g	BBM002
			Cadmium	LT 7.4 -01	ug/g	BBP005
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BBM002
			Chlordane	LT 2. +00	ug/g	BBM002
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BBM002
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BBM002
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BBM002
			Chromium	1.7 +01	ug/g	BBP005
			Copper	1.2 +01	ug/g	BBP005
			Dibromochloropropane	LT 5.0 -03	ug/g	BBK005
			Dibromochloropropane	LT 3. -01	ug/g	BBM002
			Dicyclopentadiene	LT 1. +00	ug/g	BBM002
			Vapona	LT 3. +00	ug/g	BBM002
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BBM002
			Dithiane	LT 4. -01	ug/g	BBM002
			Dieldrin	LT 3. -01	ug/g	BBM002
			Endrin	LT 5. -01	ug/g	BBM002
			Mercury	LT 5.0 -02	ug/g	BB0005
			Hydrazine	LT 5. +01	ug/g	BBG005
			Isodrin	LT 3. -01	ug/g	BBM002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	0-1	Soil	Methylhydrazine	LT 2. +02	ug/g	BBJ005
			Malethion	LT 7. -01	ug/g	BBM002
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BBI005
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BBI005
			1,4-Oxathiane	LT 3. -01	ug/g	BBM002
			Lead	LT 1.7 +01	ug/g	BBP005
			Dichlorodiphenylethane	LT 6. -01	ug/g	BBM002
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BBM002
			Parathion	LT 9. -01	ug/g	BBM002
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BBM002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBH005
			Zinc	5.2 +01	ug/g	BBP005
	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BBL002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BBL002
			1,1-Dichloroethane	LT 2. +00	ug/g	BBL002
			1,2-Dichloroethane	LT 2. +00	ug/g	BBL002
			1,2-Dichloroethane	LT 6. -01	ug/g	BBL002
			m-Xylene	LT 8. -01	ug/g	BBL002
			Aldrin	LT 3. -01	ug/g	BBM003
			Arsenic	LT 2.5 +00	ug/g	BBN006
			Atrazine	LT 3. -01	ug/g	BBM003
			Bicycloheptadiene	LT 4. -01	ug/g	BBL002
			Benzene	LT 3. -01	ug/g	BBL002
			Carbon Tetrachloride	LT 3. -01	ug/g	BBL002
			Cadmium	LT 7.4 -01	ug/g	BBP006
			Methylene Chloride	LT 2. +00	ug/g	BBL002
			Chloroform	LT 3. -01	ug/g	BBL002
0008	4-5	Soil	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BBM003
			Chlorobenzene	LT 1. +00	ug/g	BBL002
			Chlordane	LT 2. +00	ug/g	BBM003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BBM003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	4-5	Soil	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BBM003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BBM003
			Chromium	1.0 +01	ug/g	BBP006
			Copper	2.2 +01	ug/g	BBP006
			Dibromochloropropane	LT 5.0 -03	ug/g	BBK006
			Dibromochloropropane	LT 2. +00	ug/g	BBL002
			Dibromochloropropane	LT 3. -01	ug/g	BBM003
			Dicyclopentadiene	LT 7. -01	ug/g	BBL002
			Dicyclopentadiene	LT 1. +00	ug/g	BBM003
			Vapors	LT 3. +00	ug/g	BBM003
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BBM003
			Dithiane	LT 4. -01	ug/g	BBM003
			Dieldrin	LT 3. -01	ug/g	BBM003
			Dimethyldisulfide	LT 2. +01	ug/g	BBL002
			Endrin	LT 5. -01	ug/g	BBM003
			Ethylbenzene	LT 4. -01	ug/g	BBL002
			Mercury	LT 5.0 -02	ug/g	BB0006
			Hydrazine	LT 5. +01	ug/g	BBG006
			Isodrin	LT 3. -01	ug/g	BBM003
			Toluene	LT 3. -01	ug/g	BBL002
			Methylhydrazine	LT 2. +02	ug/g	BBJ006
			Methylisobutyl Ketone	LT 7. -01	ug/g	BBL002
			Malathion	LT 7. -01	ug/g	BBM003
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BBI006
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BBI006
			1,4-Oxathiane	LT 3. -01	ug/g	BBM003
			Lead	LT 8.4 +00	ug/g	BBP006
			Dichlorodiphenylethane	LT 6. -01	ug/g	BBM003
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BBM003
			Parathion	LT 9. -01	ug/g	BBM003
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BBM003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	4-5	Soil	Tetrachloroethene	LT 3. -01	ug/g	BBL002
			Trichloroethene	LT 5. -01	ug/g	BBL002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBH006
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BBL002
			Zinc	5.8 +01	ug/g	BBP006
0008	9-10	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BBL003
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BBL003
			1,1-Dichloroethane	LT 2. +00	ug/g	BBL003
			1,2-Dichloroethane	LT 2. +00	ug/g	BBL003
			1,2-Dichloroethane	LT 6. -01	ug/g	BBL003
			m-Xylene	LT 8. -01	ug/g	BBL003
			Aldrin	LT 3. -01	ug/g	BBM004
			Arsenic	LT 2.5 +00	ug/g	BBN007
			Atrazine	LT 3. -01	ug/g	BBM004
			Bicycloheptadiene	LT 4. -01	ug/g	BBL003
			Benzene	LT 3. -01	ug/g	BBL003
			Carbon Tetrachloride	LT 3. -01	ug/g	BBL003
			Cadmium	LT 7.4 -01	ug/g	BBP007
			Methylene Chloride	LT 2. +00	ug/g	BBL003
			Chloroform	LT 3. -01	ug/g	BBL003
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BBM004
			Chlorobenzene	LT 1. +00	ug/g	BBL003
			Chlordane	LT 2. +00	ug/g	BBM004
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BBM004
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BBM004
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BBM004
			Chromium	1.7 +01	ug/g	BBP007
			Copper	1.9 +01	ug/g	BBP007
			Dibromochloropropane	LT 5.0 -03	ug/g	BBK007
			Dibromochloropropane	LT 2. +00	ug/g	BBL003
			Dibromochloropropane	LT 3. -01	ug/g	BBM004
			Dicyclopentadiene	LT 7. -01	ug/g	BBL003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0008	9-10	Soil	Dicyclopentadiene	LT 1. +00	ug/g	BBM004
			Vapona	LT 3. +00	ug/g	BBM004
			Dilsopropylmethyl Phosphonate	LT 1. +00	ug/g	BBM004
			Dithiane	LT 4. -01	ug/g	BBM004
			Dieldrin	LT 3. -01	ug/g	BBM004
			Dimethyldisulfide	LT 2. +01	ug/g	BBM003
			Endrin	LT 5. -01	ug/g	BBM004
			Ethylbenzene	LT 4. -01	ug/g	BBM003
			Mercury	LT 5.0 -02	ug/g	BBM007
			Hydrazine	LT 5. +01	ug/g	BBM007
			Isodrin	LT 3. -01	ug/g	BBM004
			Toluene	LT 3. -01	ug/g	BBM003
			Methylhydrazine	LT 2. +02	ug/g	BBM007
			Methylisobutyl Ketone	LT 7. -01	ug/g	BBM003
			Malethion	LT 7. -01	ug/g	BBM004
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BBM007
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BBM007
			1,4-Oxathiane	LT 3. -01	ug/g	BBM004
			Lead	1.3 +01	ug/g	BBM007
			Dichlorodiphenylethane	LT 6. -01	ug/g	BBM004
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BBM004
			Parathion	LT 9. -01	ug/g	BBM004
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BBM004
			Tetrachloroethene	LT 3. -01	ug/g	BBM003
			Trichloroethene	LT 5. -01	ug/g	BBM003
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BBM007
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BBM003
			Zinc	6.0 +01	ug/g	BBM007
0009	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BEG008
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEG008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0009	4-5	Soil	1,1-Dichloroethane	LT 2. +00	ug/g	BEG008
			1,2-Dichloroethane	LT 2. +00	ug/g	BEG008
			1,2-Dichloroethane	LT 6. -01	ug/g	BEG008
			m-Xylene	LT 8. -01	ug/g	BEG008
			Aldrin	LT 3. -01	ug/g	BED010
			Arsenic	4.2 +00	ug/g	BFH005
			Atrazine	LT 3. -01	ug/g	BED010
			Bicycloheptadiene	LT 4. -01	ug/g	BEG008
			Benzene	LT 3. -01	ug/g	BEG008
			Carbon Tetrachloride	LT 3. -01	ug/g	BEG008
			Cadmium	LT 7.4 -01	ug/g	BEK013
			Methylene Chloride	LT 2. +00	ug/g	BEG008
			Chloroform	LT 3. -01	ug/g	BEG008
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED010
			Chlorobenzene	LT 1. +00	ug/g	BEG008
			Chlordane	LT 2. +00	ug/g	BED010
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED010
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED010
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED010
			Chromium	1.6 +01	ug/g	BEK013
			Copper	1.8 +01	ug/g	BEK013
			Dibromochloropropane	LT 5.0 -03	ug/g	BEK013
			Dibromochloropropane	LT 3. -01	ug/g	BED010
			Dibromochloropropane	LT 2. +00	ug/g	BEG008
			Dicyclopentadiene	LT 1. +00	ug/g	BED010
			Dicyclopentadiene	LT 7. -01	ug/g	BEG008
			Vapona	LT 3. +00	ug/g	BED010
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BED010
			Dithiane	LT 4. -01	ug/g	BED010
			Dieldrin	LT 3. -01	ug/g	BED010
			Dimethyldisulfide	LT 2. +01	ug/g	BEG008
			Endrin	LT 5. -01	ug/g	BED010
			Ethylbenzene	LT 4. -01	ug/g	BEG008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0009	4-5	Soil	Mercury	LT 5.0 -02	ug/g	BEO009
			Hydrazine	LT 5. +01	ug/g	BDY013
			Isodrin	LT 3. -01	ug/g	BEO010
			Toluene	LT 3. -01	ug/g	BEO008
			Methylhydrazine	LT 2. +02	ug/g	BDZ013
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEO008
			Malathion	LT 7. -01	ug/g	BEO010
			N-Nitrosodimethylemine	LT 2.6 -01	ug/g	BEO013
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEO013
			1,4-Oxathiane	LT 3. -01	ug/g	BEO010
			Lead	1.9 +01	ug/g	BEK013
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEO010
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BEO010
			Parathion	LT 9. -01	ug/g	BEO010
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6. -01	ug/g	BEO010
			Tetrachloroethene	LT 3. -01	ug/g	BEO008
			Trichloroethene	LT 5. -01	ug/g	BEO008
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BEA013
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEO008
			Zinc	8.0 +01	ug/g	BEK013
0010	0-1	Soil	Aldrin	LT 3. -01	ug/g	BEU002
			Arsenic	LT 2.5 +00	ug/g	BFH012
			Atrazine	LT 3. -01	ug/g	BEU002
			Cadmium	LT 7.4 -01	ug/g	BEK020
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BEU002
			Chlordane	LT 2. +00	ug/g	BEU002
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BEU002
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BEU002
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BEU002
			Chromium	1.0 +01	ug/g	BEK020

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0010	0-1	Soil	Copper	1.2 +01	ug/g	BEK020
			Dibromochloropropane	LT 5.0 -03	ug/g	BEF005
			Dibromochloropropane	LT 3. -01	ug/g	BEU002
			Dicyclopentadiene	LT 1. +00	ug/g	BEU002
			Vapone	LT 3. +00	ug/g	BEU002
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BEU002
			Dithiane	LT 4. -01	ug/g	BEU002
			Dieldrin	LT 3. -01	ug/g	BEU002
			Endrin	LT 5. -01	ug/g	BEU002
			Mercury	LT 5.0 -02	ug/g	BEU020
			Hydrazine	LT 5. +01	ug/g	BE9005
			Isodrin	LT 3. -01	ug/g	BEU002
			Methylhydrazine	LT 2. +02	ug/g	BET005
			Malathion	LT 7. -01	ug/g	BEU002
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEQ005
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEQ005
			1,4-Oxathiane	LT 3. -01	ug/g	BEU002
			Lead	2.1 +01	ug/g	BEK020
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEU002
			Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BEU002
0010	4-5	Soil	Parathion	LT 9. -01	ug/g	BEU002
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BEU002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BER005
			Zinc	5.8 +01	ug/g	BEK020
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BEV002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEV002
			1,1-Dichloroethane	LT 2. +00	ug/g	BEV002
			1,2-Dichloroethane	LT 2. +00	ug/g	BEV002
			1,2-Dichloroethane	LT 6. -01	ug/g	BEV002
			m-Xylene	LT 8. -01	ug/g	BEV002
			Aldrin	LT 3. -01	ug/g	BEU003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0010	4-5	Soil	Arsenic	LT 2.5	+00	BFH013
			Atrazine	LT 3.	-01	BEU003
			Bicycloheptadiene	LT 4.	-01	BEV002
			Benzene	LT 3.	-01	BEV002
			Carbon Tetrachloride	LT 3.	-01	BEV002
			Cadmium	LT 7.4	-01	BF1005
			Methylene Chloride	LT 2.	+00	BEV002
			Chloroform	LT 3.	-01	BEV002
			Hexachlorocyclopentadiene	LT 6.	-01	BEU003
			Chlorobenzene	LT 1.	+00	BEV002
			Chlordane	LT 2.	+00	BEU003
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	BEU003
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	BEU003
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	BEU003
			Chromium	9.4	+00	BF1005
			Copper	6.7	+00	BF1005
			Dibromochloropropane	LT 5.0	-03	BEF006
			Dibromochloropropane	LT 3.	-01	BEU003
			Dibromochloropropane	LT 2.	+00	BEV002
			Dicyclopentadiene	LT 1.	+00	BEU003
			Dicyclopentadiene	LT 7.	-01	BEV002
			Vapona	LT 3.	+00	BEU003
			Diisopropylmethyl Phosphonate	LT 1.	+00	BEU003
			Dithiane	LT 4.	-01	BEU003
			Dieldrin	LT 3.	-01	BEU003
			Dimethyldisulfide	LT 2.	+01	BEV002
			Endrin	LT 5.	-01	BEU003
			Ethylbenzene	LT 4.	-01	BEV002
			Mercury	LT 5.0	-02	BFJ005
			Hydrazine	LT 5.	+01	BEJ006
			Isodrin	LT 3.	-01	BEU003
			Toluene	LT 3.	-01	BEV002
			Methylhydrazine	LT 2.	+02	BET006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0010	4-5	Soil	Methylisobutyl Ketone	1.0 +00	ug/g	BEV002
			Malathion	LT 7. -01	ug/g	BEU003
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BE0006
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BE0006
			1,4-Oxathiane	LT 3. -01	ug/g	BEU003
			Lead	LT 8.4 +00	ug/g	BF1005
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEU003
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BEU003
			Parathion	LT 9. -01	ug/g	BEU003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BEU003
			Tetrachloroethene	LT 3. -01	ug/g	BEV002
			Trichloroethene	LT 5. -01	ug/g	BEV002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BER006
			Ortho- & Para-Xylene Zinc	LT 5. +00	ug/g	BEV002
0010	9-10	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BEV003
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEV003
			1,1-Dichloroethane	LT 2. +00	ug/g	BEV003
			1,2-Dichloroethane	LT 2. +00	ug/g	BEV003
			1,2-Dichloroethane	LT 6. -01	ug/g	BEV003
			m-Xylene	LT 8. -01	ug/g	BEV003
			Aldrin	LT 3. -01	ug/g	BEU004
			Arsenic	LT 2.5 +00	ug/g	BFH014
			Atrazine	LT 3. -01	ug/g	BEU004
			Bicycloheptadiene	LT 4. -01	ug/g	BEV003
			Benzene	LT 3. -01	ug/g	BEV003
			Carbon Tetrachloride	LT 3. -01	ug/g	BEV003
			Cadmium	LT 7.4 -01	ug/g	BF1006
			Methylene Chloride	LT 2. +00	ug/g	BEV003
			Chloroform	LT 3. -01	ug/g	BEV003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0010	9-10	Soil	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BEU004
			Chlorobenzene	LT 1. +00	ug/g	BEU003
			Chlordane	LT 2. +00	ug/g	BEU004
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BEU004
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BEU004
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BEU004
			Chromium	LT 6.5 +00	ug/g	BF1006
			Copper	LT 1.3 +01	ug/g	BF1006
			Dibromochloropropane	LT 5.0 -03	ug/g	BEU007
			Dibromochloropropane	LT 3. -01	ug/g	BEU004
			Dibromochloropropane	LT 2. +00	ug/g	BEU003
			Dicyclopentadiene	LT 1. +00	ug/g	BEU004
			Dicyclopentadiene	LT 7. -01	ug/g	BEU003
			Vapona	LT 3. +00	ug/g	BEU004
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BEU004
			Dithiane	LT 4. -01	ug/g	BEU004
			Diethrin	LT 3. -01	ug/g	BEU004
			Dimethyldisulfide	LT 2. +01	ug/g	BEU003
			Endrin	LT 5. -01	ug/g	BEU004
			Ethylbenzene	LT 4. -01	ug/g	BEU003
			Mercury	LT 5.0 -02	ug/g	BFJ006
			Hydrazine	LT 5. +01	ug/g	BEU007
			Isodrin	LT 3. -01	ug/g	BEU004
			Toluene	LT 3. -01	ug/g	BEU003
			Methylhydrazine	LT 2. +02	ug/g	BEU007
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEU003
			Malethion	LT 7. -01	ug/g	BEU004
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEU007
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEU007
			1,4-Oxathiane	LT 3. -01	ug/g	BEU004
			Lead	LT 8.4 +00	ug/g	BF1006
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEU004
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BEU004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0010	9-10	Soil	Parathion	LT 9. -01	ug/g	BEU004
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BEU004
			Tetrachloroethene	LT 3. -01	ug/g	BEV003
			Trichloroethene	LT 5. -01	ug/g	BEV003
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BER007
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEV003
			Zinc	LT 3.9 +01	ug/g	BF1006
0011	0-1	Soil	Aldrin	LT 3. -01	ug/g	BDP002
			Arsenic	LT 2.5 +00	ug/g	BDC012
			Atrazine	LT 3. -01	ug/g	BDP002
			Cadmium	LT 7.4 -01	ug/g	BCX016
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BDP002
			Chlordane	LT 6. -01	ug/g	BDP002
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BDP002
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BDP002
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BDP002
			Chromium	LT 2.2 +01	ug/g	BCX016
			Copper	3.0 +01	ug/g	BCX016
			Dibromochloropropane	LT 3. -01	ug/g	BDP002
			Dibromochloropropane	LT 5.0 -03	ug/g	BDQ005
			Dicyclopentadiene	LT 4. -01	ug/g	BDP002
			Vapona	LT 3. -01	ug/g	BDP002
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BDP002
			Dithiane	LT 7. +00	ug/g	BDP002
			Dieldrin	LT 3. -01	ug/g	BDP002
			Endrin	LT 3. -01	ug/g	BDP002
			Mercury	LT 5.0 -02	ug/g	BCY016
			Hydrazine	LT 5. +01	ug/g	BD1005
			Isodrin	LT 3. -01	ug/g	BDP002
			Methylhydrazine	LT 2. +02	ug/g	BDS005
			Malathion	LT 3. -01	ug/g	BDP002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	0-1	Soil	N-Nitrosodimethylemine	LT 2.6	-01 ug/g	BDU005
			N-Nitrosodi-N-Propylamine	LT 1.0	-01 ug/g	BDU005
			1,4-Oxathiane	LT 6.	+00 ug/g	BDP002
			Lead	LT 2.1	+01 ug/g	BCX016
			Dichlorodiphenylethane	LT 3.	-01 ug/g	BDP002
			Dichlorodiphenyltrichloroethane	LT 6.	-01 ug/g	BDP002
			Parathion	LT 4.	-01 ug/g	BDP002
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3.	-01 ug/g	BDP002
			Unsymmetrical Dimethyl Hydrazine	LT 2.	+02 ug/g	SDR005
			Zinc	1.1	+02 ug/g	SCX016
0011	4-5	Soil	1,1,1-Trichloroethane	LT 3.	-01 ug/g	SDM002
			1,1,2-Trichloroethane	LT 3.	-01 ug/g	SDM002
			1,1-Dichloroethane	LT 9.	-01 ug/g	SDM002
			1,2-Dichloroethane	LT 3.	-01 ug/g	SDM002
			1,2-Dichloroethane	LT 3.	-01 ug/g	SDM002
			m-Xylene	LT 7.	-01 ug/g	SDM002
			Aldrin	LT 3.	-01 ug/g	BDP003
			Arsenic	LT 2.5	+00 ug/g	BCX013
			Atrazine	LT 3.	-01 ug/g	BDP003
			Bicycloheptadiene	LT 3.	-01 ug/g	SDM002
			Benzene	LT 3.	-01 ug/g	SDM002
			Carbon Tetrachloride	LT 3.	-01 ug/g	SDM002
			Cadmium	LT 7.4	-01 ug/g	BCX017
			Methylene Chloride	LT 7.	-01 ug/g	SDM002
			Chloroform	LT 3.	-01 ug/g	SDM002
			Hexachlorocyclopentadiene	LT 3.	-01 ug/g	BDP003
			Chlorobenzene	LT 3.	-01 ug/g	SDM002
			Chlordane	LT 6.	-01 ug/g	BDP003
			p-Chlorophenylmethyl Sulfide	LT 4.	+00 ug/g	BDP003
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00 ug/g	BDP003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	4-5	Soil	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BDP003
			Chromium	2.3 +01	ug/g	BCX017
			Copper	1.6 +01	ug/g	BCX017
			Dibromochloropropane	LT 4. -01	ug/g	BDM002
			Dibromochloropropane	LT 3. -01	ug/g	BDP003
			Dibromochloropropane	LT 5.0 -03	ug/g	BDG006
			Dicyclopentadiene	LT 3. -01	ug/g	BDM002
			Dicyclopentadiene	LT 4. -01	ug/g	BDP003
			Vapona	LT 3. -01	ug/g	BDP003
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BDP003
			Dithiane	LT 7. +00	ug/g	BDP003
			Dieldrin	LT 3. -01	ug/g	BDP003
			Dimethyldisulfide	LT 8. -01	ug/g	BDM002
			Endrin	LT 3. -01	ug/g	BDP003
			Ethylbenzene	LT 3. -01	ug/g	BDM002
			Mercury	LT 5.0 -02	ug/g	BCY017
			Hydrazine	LT 5. +01	ug/g	BDT006
			Isodrin	LT 3. -01	ug/g	BDP003
			Toluene	LT 3. -01	ug/g	BDM002
			Methylhydrazine	LT 2. +02	ug/g	BDS006
			Methylisobutyl Ketone	LT 3. -01	ug/g	BDM002
			Malathion	LT 3. -01	ug/g	BDP003
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BDU006
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BDU006
			1,4-Oxathiane	LT 6. +00	ug/g	BDP003
			Lead	1.4 +01	ug/g	BCX017
			Dichlorodiphenylethane	LT 3. -01	ug/g	BDP003
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BDP003
			Parathion	LT 4. -01	ug/g	BDP003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	BDP003
			Tetrachloroethene	LT 3. -01	ug/g	BDM002
			Trichloroethene	LT 3. -01	ug/g	BDM002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	4-5	Soil	Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BD0006
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BD0002
			Zinc	6.2 +01	ug/g	BCX017
0011	9-10	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	BD0003
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BD0003
			1,1-Dichloroethane	LT 9. -01	ug/g	BD0003
			1,2-Dichloroethane	LT 3. -01	ug/g	BD0003
			1,2-Dichloroethane	LT 3. -01	ug/g	BD0003
			m-Xylene	LT 7. -01	ug/g	BD0003
			Aldrin	LT 3. -01	ug/g	BDP004
			Arsenic	LT 2.5 +00	ug/g	BD0014
			Atrazine	LT 3. -01	ug/g	BDP004
			Bicycloheptadiene	LT 3. -01	ug/g	BD0003
			Benzene	LT 3. -01	ug/g	BD0003
			Carbon Tetrachloride	LT 3. -01	ug/g	BD0003
			Cadmium	LT 7.4 -01	ug/g	BCX018
			Methylene Chloride	LT 7. -01	ug/g	BD0003
			Chloroform	LT 3. -01	ug/g	BD0003
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BDP004
			Chlorobenzene	LT 3. -01	ug/g	BD0003
			Chlordane	LT 6. -01	ug/g	BDP003
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BDP004
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BDP004
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BDP004
			Chromium	1.4 +01	ug/g	BCX018
			Copper	1.3 +01	ug/g	BCX018
			Dibromochloropropane	LT 4. -01	ug/g	BD0003
			Dibromochloropropane	LT 3. -01	ug/g	BDP004
			Dibromochloropropane	LT 5.0 -03	ug/g	BD0007
			Dicyclopentadiene	LT 3. -01	ug/g	BD0003
			Dicyclopentadiene	LT 4. -01	ug/g	BDP004
			Vapona	LT 3. -01	ug/g	BDP004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	9-10	Soil	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BDP004
			Dithiane	LT 7. +00	ug/g	BDP004
			Dieldrin	LT 3. -01	ug/g	BDP004
			Dimethyldisulfide	LT 8. -01	ug/g	BDM003
			Endrin	LT 3. -01	ug/g	BDP004
			Ethylbenzene	LT 3. -01	ug/g	BDM003
			Mercury	LT 5.0 -02	ug/g	BCY018
			Hydrazine	LT 5. +01	ug/g	BDT007
			Isodrin	LT 3. -01	ug/g	BDP004
			Toluene	LT 3. -01	ug/g	BDM003
			Methylhydrazine	LT 2. +02	ug/g	BDS007
			Methylisobutyl Ketone	LT 3. -01	ug/g	BDM003
			Malathion	LT 3. -01	ug/g	BDP004
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BDU007
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BDU007
			1,4-Oxathiane	LT 6. +00	ug/g	BDP004
			Lead	LT 8.4 +00	ug/g	BCX018
			Dichlorodiphenylethane	LT 3. -01	ug/g	BDP004
			Dichlorodiphenyltrichloro-ethene	LT 6. -01	ug/g	BDP004
			Parathion	LT 4. -01	ug/g	BDP004
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	BDP004
0011	14-15	Soil	Tetrachloroethene	LT 3. -01	ug/g	BDM003
			Trichloroethene	LT 3. -01	ug/g	BDM003
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BDR007
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BDM003
			Zinc	LT 7.3 +01	ug/g	BCX018
			1,1,1-Trichloroethane	LT 3. -01	ug/g	BDM004
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BDM004
			1,1-Dichloroethane	LT 9. -01	ug/g	BDM004
			1,2-Dichloroethane	LT 3. -01	ug/g	BDM004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	14-15	Soil	1,2-Dichloroethane	LT 3. -01	ug/g	BDM004
			m-Xylene	LT 7. -01	ug/g	BDM004
			Aldrin	LT 3. -01	ug/g	BDP005
			Arsenic	LT 2.5 +00	ug/g	SDC015
			Atrazine	LT 3. -01	ug/g	BDP005
			Bicycloheptadiene	LT 3. -01	ug/g	BDM004
			Benzene	LT 3. -01	ug/g	BDM004
			Carbon Tetrachloride	LT 3. -01	ug/g	BDM004
			Cadmium	LT 7.4 -01	ug/g	BCX019
			Methylene Chloride	LT 7. -01	ug/g	BDM004
			Chloroform	LT 3. -01	ug/g	BDM004
			Hexachlorocyclopentadiene	LT 3. -01	ug/g	BDP005
			Chlorobenzene	LT 3. -01	ug/g	BDM004
			Chlordane	LT 6. -01	ug/g	BDP005
			p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BDP005
			p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BDP005
			p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BDP005
			Chromium	1.0 +01	ug/g	BCX019
			Copper	4.4 +01	ug/g	BCX019
			Dibromochloropropane	LT 4. -01	ug/g	BDM004
			Dibromochloropropane	LT 3. -01	ug/g	BDP005
			Dibromochloropropane	LT 5.0 -03	ug/g	SDC008
			Dicyclopentadiene	LT 3. -01	ug/g	BDM004
			Dicyclopentadiene	LT 4. -01	ug/g	BDP005
			Vapona	LT 3. -01	ug/g	BDP005
			Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BDP005
			Dithiane	LT 7. +00	ug/g	BDP005
			Dieldrin	LT 3. -01	ug/g	BDP005
			Dimethyldisulfide	LT 8. -01	ug/g	BDM004
			Endrin	LT 3. -01	ug/g	BDP005
			Ethylbenzene	LT 3. -01	ug/g	BDM004
			Mercury	LT 5.0 -02	ug/g	BCY019
			Hydrazine	LT 5. +01	ug/g	BDT008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	14-15	Soil	Isodrin	LT 3. -01	ug/g	BDP005
			Toluene	LT 3. -01	ug/g	BDM004
			Methylhydrazine	LT 2. +02	ug/g	BDS008
			Methylisobutyl Ketone	LT 3. -01	ug/g	BDM004
			Malethion	LT 3. -01	ug/g	BDP005
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BDU008
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BDU008
			1,4-Oxathiane	LT 6. +00	ug/g	BDP005
			Lead	LT 8.4 +00	ug/g	BCX019
			Dichlorodiphenylethane	LT 3. -01	ug/g	BDP005
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BDP005
			Parathion	LT 4. -01	ug/g	BDP005
			2-Chloro-1(2,4-Dichlorophenyl) Vinyllethyl Phosphates	LT 3. -01	ug/g	BDP005
			Tetrachloroethene	LT 3. -01	ug/g	BDM004
			Trichloroethene	LT 3. -01	ug/g	BDM004
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BDR008
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BDM004
			Zinc	LT 1.2 +02	ug/g	BCX019
	19-20	Soil	1,1,1-Trichloroethane	LT 3. -01	ug/g	BDM005
			1,1,2-Trichloroethane	LT 3. -01	ug/g	BDM005
			1,1-Dichloroethane	LT 9. -01	ug/g	BDM005
			1,2-Dichloroethane	LT 3. -01	ug/g	BDM005
			m-Xylene	LT 7. -01	ug/g	BDM005
			Aldrin	LT 3. -01	ug/g	BDP006
			Arsenic	LT 2.5 +00	ug/g	BCD016
			Atrazine	LT 3. -01	ug/g	BDP006
			Bicycloheptadiene	LT 3. -01	ug/g	BDM005
			Benzene	LT 3. -01	ug/g	BDM005
			Carbon Tetrachloride	LT 3. -01	ug/g	BDM005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	19-20	Soil	Cadmium	LT 7.4	-01	BCX020
			Methylene Chloride	LT 7.	-01	BDM005
			Chloroform	LT 3.	-01	BDM005
			Hexachlorocyclopentadiene	LT 3.	-01	BDP006
			Chlorobenzene	LT 3.	-01	BDM005
			Chlordane	LT 6.	-01	BDP006
			p-Chlorophenylmethyl Sulfide	LT 4.	+00	BDP006
			p-Chlorophenylmethyl Sulfoxide	LT 7.	+00	BDP006
			p-Chlorophenylmethyl Sulfone	LT 6.	-01	BDP006
			Chromium	1.2	+01	BCX020
			Copper	4.4	+01	BCX020
			Dibromochloropropane	LT 4.	-01	BDM005
			Dibromochloropropane	LT 3.	-01	BDP006
			Dibromochloropropane	LT 5.0	-03	BDM009
			Dicyclopentadiene	LT 3.	-01	BDM005
			Dicyclopentadiene	LT 4.	-01	BDP006
			Vapona	LT 3.	-01	BDP006
			Diisopropylmethyl Phosphonate	LT 3.	-01	BDP006
			Dithiane	LT 7.	+00	BDP006
			Dieldrin	LT 3.	-01	BDP006
			Dimethyldisulfide	LT 8.	-01	BDM005
			Endrin	LT 3.	-01	BDP006
			Ethylbenzene	LT 3.	-01	BDM005
			Mercury	LT 5.0	-02	BCY020
			Hydrazine	LT 5.	+01	BDT009
			Isodrin	LT 3.	-01	BDP006
			Toluene	LT 3.	-01	BDM005
			Methylhydrazine	LT 2.	+02	BDS009
			Methylisobutyl Ketone	LT 3.	-01	BDM005
			Malathion	LT 3.	-01	BDP006
			N-Nitrosodimethylamine	LT 2.6	-01	BDU009
			N-Nitrosodi-N-Propylamine	LT 1.0	-01	BDU009
			1,4-Oxathiane	LT 6.	+00	BDP006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0011	19-20	Soil	Lead	LT 8.4 +00	ug/g	BCX020
			Dichlorodiphenylethane	LT 3. -01	ug/g	BDP006
			Dichlorodiphenyltrichloroethane	LT 6. -01	ug/g	BDP006
			Parathion	LT 4. -01	ug/g	BDP006
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 3. -01	ug/g	BDP006
			Tetrachloroethene	LT 3. -01	ug/g	BDM005
			Trichloroethene	LT 3. -01	ug/g	BDM005
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BDR009
			Ortho- & Para-Xylene	LT 3. -01	ug/g	BDM005
			Zinc	1.1 +02	ug/g	BCX020
0012	0-1	Soil	Aldrin	LT 3. -01	ug/g	BED006
			Arsenic	LT 2.5 +00	ug/g	BDC021
			Atrazine	LT 3. -01	ug/g	BED006
			Cadmium	LT 7.4 -01	ug/g	BEK009
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED006
			Chlordane	LT 2. +00	ug/g	BED006
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED006
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED006
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED006
			Chromium	9.9 +00	ug/g	BEK009
			Copper	1.7 +01	ug/g	BEK009
			Dibromochloropropane	LT 5.0 -03	ug/g	BEK009
			Dibromochloropropane	LT 3. -01	ug/g	BED006
			Dicyclopentadiene	LT 1. +00	ug/g	BED006
			Vapona	LT 3. +00	ug/g	BED006
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BED006
			Dithiane	LT 4. -01	ug/g	BED006
			Dieldrin	LT 3. -01	ug/g	BED006
			Endrin	LT 5. -01	ug/g	BED006
			Mercury	9.2 -02	ug/g	BEK005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	0-1	Soil	Hydrazine	LT 5. +01	ug/g	BDY009
			Isodrin	LT 3. -01	ug/g	BED006
			Methylhydrazine	LT 2. +02	ug/g	BDZ009
			Malethion	LT 7. -01	ug/g	BED006
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEB009
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEB009
			1,4-Oxathiane	LT 3. -01	ug/g	BED006
			Lead	2.2 +01	ug/g	BEK009
			Dichlorodiphenylethane	LT 6. -01	ug/g	BED006
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BED006
0012	4-5	Soil	Parathion	LT 9. -01	ug/g	BED006
			2-Chloro-1(2,4-Dichlorophenyl)	LT 6. -01	ug/g	BED006
			Vinylidene Phosphates			
			Unsymmetrical Dimethyl	LT 2. +02	ug/g	BEA009
			Hydrazine			
			Zinc	7.6 +01	ug/g	BEK009
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BEG005
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEG005
			1,1-Dichloroethane	LT 2. +00	ug/g	BEG005
			1,2-Dichloroethane	LT 2. +00	ug/g	BEG005
			1,2-Dichloroethane	LT 6. -01	ug/g	BEG005
			m-Xylene	LT 8. -01	ug/g	BEG005
			Aldrin	LT 3. -01	ug/g	BED007
			Arsenic	1.2 +01	ug/g	BDC022
			Atrazine	LT 3. -01	ug/g	BED007
			Bicycloheptadiene	LT 4. -01	ug/g	BEG005
			Benzene	LT 3. -01	ug/g	BEG005
			Carbon Tetrachloride	LT 3. -01	ug/g	BEG005
			Cadmium	LT 7.4 -01	ug/g	BEK010
			Methylene Chloride	LT 2. +00	ug/g	BEG005
			Chloroform	LT 3. -01	ug/g	BEG005
0012	4-5	Soil	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED007
			Chlorobenzene	LT 1. +00	ug/g	BEG005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	4-5	Soil	Chlordane	LT 2. +00	ug/g	BED007
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED007
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED007
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED007
			Chromium	1.5 +01	ug/g	BEK010
			Copper	2.5 +01	ug/g	BEK010
			Dibromochloropropane	LT 5.0 -03	ug/g	BEK010
			Dibromochloropropane	LT 3. -01	ug/g	BED007
			Dibromochloropropane	LT 2. +00	ug/g	BEG005
			Dicyclopentadiene	LT 1. +00	ug/g	BED007
			Dicyclopentadiene	LT 7. -01	ug/g	BEG005
			Vapona	LT 3. +00	ug/g	BED007
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BED007
			Dithiane	LT 4. -01	ug/g	BED007
			Dieldrin	LT 3. -01	ug/g	BED007
			Dimethyldisulfide	LT 2. +01	ug/g	BEG005
			Endrin	LT 5. -01	ug/g	BED007
			Ethylbenzene	LT 4. -01	ug/g	BEG005
			Mercury	LT 5.0 -02	ug/g	BEG006
			Hydrazine	LT 5. +01	ug/g	BDY010
			Isodrin	LT 3. -01	ug/g	BED007
			Toluene	LT 3. -01	ug/g	BEG005
			Methylhydrazine	LT 2. +02	ug/g	BDZ010
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEG005
			Malathion	LT 7. -01	ug/g	BED007
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEK010
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEK010
			1,4-Oxathiane	LT 3. -01	ug/g	BED007
			Lead	2.3 +01	ug/g	BEK010
			Dichlorodiphenylethane	LT 6. -01	ug/g	BED007
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BED007
			Parathion	LT 9. -01	ug/g	BED007
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BED007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	4-5	Soil	Tetrachloroethene	LT 3. -01	ug/g	BEG005
			Trichloroethene	LT 5. -01	ug/g	BEG005
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BEA010
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEG005
			Zinc	1.3 +02	ug/g	BEK010
0012	7.5-8.5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BEG006
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEG006
			1,1-Dichloroethane	LT 2. +00	ug/g	BEG006
			1,2-Dichloroethane	LT 2. +00	ug/g	BEG006
			1,2-Dichloroethane	LT 6. -01	ug/g	BEG006
			m-Xylene	LT 8. -01	ug/g	BEG006
			Aldrin	LT 3. -01	ug/g	BED008
			Arsenic	LT 2.5 +00	ug/g	BDC023
			Atrazine	LT 3. -01	ug/g	BED008
			Bicycloheptadiene	LT 4. -01	ug/g	BEG006
			Benzene	LT 3. -01	ug/g	BEG006
			Carbon Tetrachloride	LT 3. -01	ug/g	BEG006
			Cadmium	LT 7.4 -01	ug/g	BEK011
			Methylene Chloride	LT 2. +00	ug/g	BEG006
			Chloroform	LT 3. -01	ug/g	BEG006
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED008
			Chlorobenzene	LT 1. +00	ug/g	BEG006
			Chlordane	LT 2. +00	ug/g	BED008
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED008
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED008
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED008
			Chromium	LT 6.5 +00	ug/g	BEK011
			Copper	3.1 +01	ug/g	BEK011
			Dibromochloropropane	LT 5.0 -03	ug/g	BEK011
			Dibromochloropropane	LT 3. -01	ug/g	BED008
			Dibromochloropropane	LT 2. +00	ug/g	BEG006
			Dicyclopentadiene	LT 1. +00	ug/g	BED008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	7.5-8.5	Soil	Dicyclopentadiene	LT 7. -01	ug/g	BEG006
			Vadose	LT 3. +00	ug/g	BED008
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BED008
			Dithiane	LT 4. -01	ug/g	BED008
			Dieldrin	LT 3. -01	ug/g	BED008
			Dimethyldisulfide	LT 2. +01	ug/g	BEG006
			Endrin	LT 5. -01	ug/g	BED008
			Ethylbenzene	LT 4. -01	ug/g	BEG006
			Mercury	LT 3.0 -02	ug/g	BEG007
			Hydrazine	LT 5. +01	ug/g	BDY011
			Isodrin	LT 3. -01	ug/g	BED008
			Toluene	LT 3. -01	ug/g	BEG006
			Methylhydrazine	LT 2. +02	ug/g	BDZ011
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEG006
			Malathion	LT 7. -01	ug/g	BED008
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BES011
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BES011
			1,4-Oxathiane	LT 3. -01	ug/g	BED008
			Lead	LT 8.4 +00	ug/g	BEK011
			Dichlorodiphenylethane	LT 6. -01	ug/g	BED008
0012	9-10	Soil	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BED008
			Parathion	LT 9. -01	ug/g	BED008
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BED008
			Tetrachloroethene	LT 3. -01	ug/g	BEG006
			Trichloroethene	LT 5. -01	ug/g	BEG006
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BEAD11
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEG006
			Zinc	1.0 +02	ug/g	BEK011
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BEG007
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEG007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	9-10	Soil	1,1-Dichloroethane	LT 2. +00	ug/g	BEG007
			1,2-Dichloroethane	LT 2. +00	ug/g	BEG007
			1,2-Dichloroethane	LT 6. -01	ug/g	BEG007
			m-Xylene	LT 8. -01	ug/g	BEG007
			Aldrin	LT 3. -01	ug/g	BED009
			Arsenic	LT 2.5 +00	ug/g	BDC024
			Atrazine	LT 3. -01	ug/g	BED009
			Bicycloheptadiene	LT 4. -01	ug/g	BEG007
			Benzene	LT 3. -01	ug/g	BEG007
			Carbon Tetrachloride	LT 3. -01	ug/g	BEG007
			Cadmium	LT 7.4 -01	ug/g	BEK012
			Methylene Chloride	LT 2. +00	ug/g	BEG007
			Chloroform	LT 3. -01	ug/g	BEG007
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED009
			Chlorobenzene	LT 1. +00	ug/g	BEG007
			Chlordane	LT 2. +00	ug/g	BED009
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED009
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED009
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED009
			Chromium	LT 6.5 +00	ug/g	BEK012
			Copper	LT 3.9 +01	ug/g	BEK012
			Dibromochloropropane	LT 5.0 -03	ug/g	BEK012
			Dibromochloropropane	LT 3. -01	ug/g	BED009
			Dibromochloropropane	LT 2. +00	ug/g	BEG007
			Dicyclopentadiene	LT 1. +00	ug/g	BED009
			Dicyclopentadiene	LT 7. -01	ug/g	BEG007
			Vapona	LT 3. +00	ug/g	BED009
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BED009
			Dithiane	LT 4. -01	ug/g	BED009
			Dieldrin	LT 3. -01	ug/g	BED009
			Dimethyldisulfide	LT 2. +01	ug/g	BEG007
			Endrin	LT 5. -01	ug/g	BED009
			Ethylbenzene	LT 4. -01	ug/g	BEG007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0012	9-10	Soil	Mercury	LT 5.0	-02	BE0008
			Hydrazine	LT 5.	+01	BDY012
			Isodrin	LT 3.	-01	BED009
			Toluene	LT 3.	-01	BEG007
			Methylhydrazine	LT 2.	+02	BDZ012
			Methylisobutyl Ketone	LT 7.	-01	BEG007
			Malethion	LT 7.	-01	BED009
			N-Nitrosodimethylamine	LT 2.6	-01	BEB012
			N-Nitrosodi-N-Propylamine	LT 1.0	-01	BEB012
			1,4-Oxathiane	LT 3.	-01	BED009
			Lead	1.6	+01	BEK012
			Dichlorodiphenylethane	LT 6.	-01	BED009
			Dichlorodiphenyltrichloro-ethane	LT 5.	-01	BED009
			Parathion	LT 9.	-01	BED009
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	BED009
			Tetrachloroethene	LT 3.	-01	BEG007
			Trichloroethene	LT 5.	-01	BEG007
			Unsymmetrical Dimethyl Hydrazine	LT 2.	+02	BEA012
			Ortho- & Para-Xylene	LT 5.	+00	BEG007
			Zinc	1.1	+02	BEK012
0013	0-1	Soil	Aldrin	LT 3.	-01	BED002
			Arsenic	LT 2.5	+00	BDC017
			Atrazine	LT 3.	-01	BED002
			Cadmium	LT 7.4	-01	BEK005
			Hexachlorocyclopentadiene	LT 6.	-01	BED002
			Chlordane	LT 2.	+00	BED002
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	BED002
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	BED002
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	BED002
			Chromium	1.0	+01	BEK005

Note: Results for Dibromochloropropene (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Week 11 site 1-7

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0013	0-1	Soil	Copper	1.2	+01	BEK005
			Dibromochloropropane	LT 5.0	-03	BEK005
			Dibromochloropropane	LT 3.	-01	BEK002
			Dibromochloropropane	LT 1.	+00	BEK002
			Dibromochloropropane	LT 3.	+00	BEK002
			Dibromochloropropane	LT 1.	+00	BEK002
			Dibromochloropropane	LT 3.	+00	BEK002
			Dibromochloropropane	LT 1.	+00	BEK002
			Dibromochloropropane	LT 3.	+00	BEK002
			Dibromochloropropane	LT 1.	+00	BEK002
0013	4-5	Soil	Dibromochloropropane	LT 1.	+00	BEK002
			Dibromochloropropane	LT 4.	-01	BEK002
			Dibromochloropropane	LT 3.	-01	BEK002
			Dibromochloropropane	LT 3.	-01	BEK002
			Dibromochloropropane	LT 5.	-01	BEK002
			Dibromochloropropane	LT 5.0	-02	BEK002
			Dibromochloropropane	LT 5.	+01	BEK002
			Dibromochloropropane	LT 3.	-01	BEK002
			Dibromochloropropane	LT 2.	+02	BEK002
			Dibromochloropropane	LT 7.	-01	BEK002
0013	4-5	Soil	Dibromochloropropane	LT 2.6	-01	BEK002
			Dibromochloropropane	LT 1.0	-01	BEK002
			Dibromochloropropane	LT 3.	-01	BEK002
			Dibromochloropropane	LT 1.9	+01	BEK002
			Dibromochloropropane	LT 6.	-01	BEK002
			Dibromochloropropane	LT 5.	-01	BEK002
			Dibromochloropropane	LT 9.	-01	BEK002
			Dibromochloropropane	LT 6.	-01	BEK002
			Dibromochloropropane	LT 2.	+02	BEK002
			Dibromochloropropane	4.9	+01	BEK002
0013	4-5	Soil	Dibromochloropropane	LT 4.	-01	BEK002
			Dibromochloropropane	LT 4.	-01	BEK002
			Dibromochloropropane	LT 2.	+00	BEK002
			Dibromochloropropane	LT 2.	+00	BEK002
			Dibromochloropropane	LT 6.	-01	BEK002
			Dibromochloropropane	LT 8.	-01	BEK002
			Dibromochloropropane	LT 3.	-01	BEK002
			Dibromochloropropane	LT 3.	-01	BEK002
			Dibromochloropropane	LT 3.	-01	BEK002
			Dibromochloropropane	LT 3.	-01	BEK002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0013	4-5	Soil	Arsenic	LT 2.5 +00	ug/g	BDC018
			Atrazine	LT 3. -01	ug/g	BED0003
			Bicycloheptadiene	LT 4. -01	ug/g	BEG002
			Benzene	LT 3. -01	ug/g	BEG002
			Carbon Tetrachloride	LT 3. -01	ug/g	BEG002
			Cadmium	LT 7.4 -01	ug/g	BEK006
			Methylene Chloride	LT 2. +00	ug/g	BEG002
			Chloroform	LT 3. -01	ug/g	BEG002
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED0003
			Chlorobenzene	LT 1. +00	ug/g	BEG002
			Chlordane	LT 2. +00	ug/g	BED0003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED0003
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED0003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED0003
			Chromium	1.4 +01	ug/g	BEK0006
			Copper	1.6 +01	ug/g	BEK0006
			Dibromochloropropane	LT 5.0 -03	ug/g	BEK0006
			Dibromochloropropane	LT 3. -01	ug/g	BED0003
			Dibromochloropropane	LT 2. +00	ug/g	BEG002
			Dicyclopentadiene	LT 1. +00	ug/g	BED0003
			Dicyclopentadiene	LT 7. -01	ug/g	BEG002
			Vapors	LT 3. +00	ug/g	BED0003
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BED0003
			Dithiane	LT 4. -01	ug/g	BED0003
			Diethrin	LT 3. -01	ug/g	BED0003
			Dimethyldisulfide	LT 2. +01	ug/g	BEG002
			Endrin	LT 5. -01	ug/g	BED0003
			Ethylbenzene	LT 4. -01	ug/g	BEG002
			Mercury	LT 5.0 -02	ug/g	BE0011
			Hydrazine	LT 5. +01	ug/g	BDY0006
			Isodrin	LT 3. -01	ug/g	BED0003
			Toluene	LT 3. -01	ug/g	BEG002
			Methylhydrazine	LT 2. +02	ug/g	BDZ0006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0013	4-5	Soil	Methylisobutyl Ketone	LT 7. -01	ug/g	BEG002
			Malathion	LT 7. -01	ug/g	BED003
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEB006
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEB006
			1,4-Oxathiane	LT 3. -01	ug/g	BED003
			Lead	1.9 +01	ug/g	BEK006
			Dichlorodiphenylethane	LT 6. -01	ug/g	BED003
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BED003
			Parathion	LT 9. -01	ug/g	BED003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BED003
			Tetrachloroethene	LT 3. -01	ug/g	BEG002
			Trichloroethene	LT 5. -01	ug/g	BEG002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BEA006
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEG002
			Zinc	7.3 +01	ug/g	BEK006
0013	9-10	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BEG003
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEG003
			1,1-Dichloroethane	LT 2. +00	ug/g	BEG003
			1,2-Dichloroethane	LT 2. +00	ug/g	BEG003
			m-Xylene	LT 8. -01	ug/g	BEG003
			Aldrin	LT 3. -01	ug/g	BED004
			Arsenic	LT 2.5 +00	ug/g	BDC019
			Atrazine	LT 3. -01	ug/g	BED004
			Bicycloheptadiene	LT 4. -01	ug/g	BEG003
			Benzene	LT 3. -01	ug/g	BEG003
			Carbon Tetrachloride	LT 3. -01	ug/g	BEG003
			Cadmium	LT 7.4 -01	ug/g	BEK007
			Methylene Chloride	LT 2. +00	ug/g	BEG003
			Chloroform	LT 3. -01	ug/g	BEG003

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0013	9-10	Soil	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED004
			Chlorobenzene	LT 1. +00	ug/g	BEG003
			Chlordane	LT 2. +00	ug/g	BED004
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED004
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED004
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED004
			Chromium	LT 6.5 +00	ug/g	BEK007
			Copper	LT 4.4 +01	ug/g	BEK007
			Dibromochloropropane	LT 5.0 -03	ug/g	BEC007
			Dibromochloropropane	LT 3. -01	ug/g	BED004
			Dibromochloropropane	LT 2. +00	ug/g	BEG003
			Dicyclopentadiene	LT 1. +00	ug/g	BED004
			Dicyclopentadiene	LT 7. -01	ug/g	BEG003
			Vapors	LT 3. +00	ug/g	BED004
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BED004
			Dithiane	LT 4. -01	ug/g	BED004
			Diethylin	LT 3. -01	ug/g	BED004
			Dimethyldisulfide	LT 2. +01	ug/g	BEG003
			Endrin	LT 5. -01	ug/g	BED004
			Ethylbenzene	LT 4. -01	ug/g	BEG003
			Mercury	LT 5.0 -02	ug/g	BE0012
			Hydrazine	LT 5. +01	ug/g	BDY007
			Isodrin	LT 3. -01	ug/g	BED004
			Toluene	LT 3. -01	ug/g	BEG003
			Methylhydrazine	LT 2. +02	ug/g	BDZ007
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEG003
			Malathion	LT 7. -01	ug/g	BED004
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEK007
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEK007
			1,4-Oxathiane	LT 3. -01	ug/g	BED004
			Lead	1.4 +01	ug/g	BEK007
			Dichlorodiphenylethane	LT 6. -01	ug/g	BED004
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BED004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

11/11/86

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0013	9-10	Soil	Parathion	LT 9. -01	ug/g	BED004
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BED004
			Tetrachloroethene	LT 3. -01	ug/g	BEG003
			Trichloroethene	LT 5. -01	ug/g	BEG003
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BEA007
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEG003
			Zinc	9.3 +01	ug/g	BEK007
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BEG004
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEG004
			1,1-Dichloroethane	LT 2. +00	ug/g	BEG004
0013	13-14	Soil	1,2-Dichloroethane	LT 2. +00	ug/g	BEG004
			1,2-Dichloroethane	LT 6. -01	ug/g	BEG004
			m-Xylene	LT 8. -01	ug/g	BEG004
			Aldrin	LT 3. -01	ug/g	BED005
			Arsenic	LT 2.5 +00	ug/g	BDC020
			Atrazine	LT 3. -01	ug/g	BED005
			Bicycloheptadiene	LT 4. -01	ug/g	BEG004
			Benzene	LT 3. -01	ug/g	BEG004
			Carbon Tetrachloride	LT 3. -01	ug/g	BEG004
			Cadmium	LT 7.4 -01	ug/g	BEK008
0013	13-14	Soil	Methylene Chloride	LT 2. +00	ug/g	BEG004
			Chloroform	LT 3. -01	ug/g	BEG004
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED005
			Chlorobenzene	LT 1. +00	ug/g	BEG004
			Chlordane	LT 2. +00	ug/g	BED005
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED005
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED005
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED005
			Chromium	LT 6.5 +00	ug/g	BEK008
			Copper	4.8 +01	ug/g	BEK008
0013	13-14	Soil	Dibromochloropropane	LT 5.0 -03	ug/g	BEC008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0013	13-14	Soil	Dibromochloropropane	LT 3. -01	ug/g	BED005
			Dibromochloropropane	LT 2. +00	ug/g	BEG004
			Dicyclopentadiene	LT 1. +00	ug/g	BED005
			Dicyclopentadiene	LT 7. -01	ug/g	BEG004
			Vapors	LT 3. +00	ug/g	BED005
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BED005
			Dithiane	LT 4. -01	ug/g	BED005
			Dieldrin	LT 3. -01	ug/g	BED005
			Dimethyldisulfide	LT 2. +01	ug/g	BEG004
			Endrin	LT 5. -01	ug/g	BED005
			Ethylbenzene	LT 4. -01	ug/g	BEG004
			Mercury	LT 5.0 -02	ug/g	BED0013
			Hydrazine	LT 5. +01	ug/g	BDY008
			Isodrin	LT 3. -01	ug/g	BED005
			Toluene	LT 3. -01	ug/g	BEG004
			Methylhydrazine	LT 2. +02	ug/g	BDZ008
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEG004
			Malathion	LT 7. -01	ug/g	BED005
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEG008
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEG008
			1,4-Oxathiane	LT 3. -01	ug/g	BED005
			Lead	1.8 +01	ug/g	BEK008
			Dichlorodiphenylethane	LT 6. -01	ug/g	BED005
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BED005
			Parathion	LT 9. -01	ug/g	BED005
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BED005
			Tetrachloroethene	LT 3. -01	ug/g	BEG004
			Trichloroethene	LT 5. -01	ug/g	BEG004
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BEA008
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEG004
			Zinc	1.1 +02	ug/g	BEK008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

11/11/86

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Summary of Analytical Results

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	0-1	Soil	Aldrin	LT 3. -01	ug/g	BEU008
			Arsenic	LT 2.5 +00	ug/g	BFH009
			Atrazine	LT 3. -01	ug/g	BEU008
			Cadmium	LT 7.4 -01	ug/g	BEK017
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BEU008
			Chlordane	LT 2. +00	ug/g	BEU008
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BEU008
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BEU008
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BEU008
			Chromium	LT 1.1 +01	ug/g	BEK017
			Copper	1.4 +01	ug/g	BEK017
			Dibromochloropropane	LT 5.0 -03	ug/g	BEK011
			Dibromochloropropane	LT 3. -01	ug/g	BEU008
			Dicyclopentadiene	LT 1. +00	ug/g	BEU008
			Vapona	LT 3. +00	ug/g	BEU008
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BEU008
			Dithiane	LT 4. -01	ug/g	BEU008
			Dieldrin	LT 3. -01	ug/g	BEU008
			Endrin	LT 5. -01	ug/g	BEU008
			Mercury	LT 5.0 -02	ug/g	BEK017
			Hydrazine	LT 5. +01	ug/g	BEK011
			Isodrin	LT 3. -01	ug/g	BEU008
			Methylhydrazine	LT 2. +02	ug/g	BEK011
			Malathion	LT 7. -01	ug/g	BEU008
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEK011
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEK011
			1,4-Oxathiane	LT 3. -01	ug/g	BEU008
			Lead	2.6 +01	ug/g	BEK017
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEU008
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BEU008
			Parathion	LT 9. -01	ug/g	BEU008
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BEU008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	0-1	Soil	Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BER011
			Zinc	5.8 +01	ug/g	BEK017
0014	4-5	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BEV006
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEV006
			1,1-Dichloroethane	LT 2. +00	ug/g	BEV006
			1,2-Dichloroethane	LT 2. +00	ug/g	BEV006
			1,2-Dichloroethane	LT 6. -01	ug/g	BEV006
			m-Xylene	LT 8. -01	ug/g	BEV006
			Aldrin	LT 3. -01	ug/g	BEU009
			Arsenic	LT 2.5 +00	ug/g	BFH010
			Atrazine	LT 3. -01	ug/g	BEU009
			Bicycloheptadiene	LT 4. -01	ug/g	BEV006
			Benzene	LT 3. -01	ug/g	BEV006
			Carbon Tetrachloride	LT 3. -01	ug/g	BEV006
			Cadmium	LT 7.4 -01	ug/g	BEK018
			Methylene Chloride	LT 2. +00	ug/g	BEV006
			Chloroform	LT 3. -01	ug/g	BEV006
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BEU009
			Chlorobenzene	LT 1. +00	ug/g	BEV006
			Chlordane	LT 2. +00	ug/g	BEU009
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BEU009
			p-Chlorophenylmethyl Sulfide	LT 3. -01	ug/g	BEU009
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BEU009
			Chromium	LT 6.5 +00	ug/g	BEK018
			Copper	6.3 +00	ug/g	BEK018
			Dibromochloropropane	LT 5.0 -03	ug/g	BEK012
			Dibromochloropropane	LT 3. -01	ug/g	BEU009
			Dibromochloropropane	LT 2. +00	ug/g	BEV006
			Dicyclopentadiene	LT 1. +00	ug/g	BEU009
			Dicyclopentadiene	LT 7. -01	ug/g	BEV006
			Vapona	LT 3. +00	ug/g	BEU009
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BEU009

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	4-5	Soil	Dithiane	LT 4. -01	ug/g	BEU009
			Dieldrin	LT 3. -01	ug/g	BEU009
			Dimethyldisulfide	LT 2. +01	ug/g	BEV006
			Endrin	LT 5. -01	ug/g	BEU009
			Ethylbenzene	LT 4. -01	ug/g	BEV006
			Mercury	LT 5.0 -02	ug/g	BE0018
			Hydrazine	LT 5. +01	ug/g	BE0012
			Isodrin	LT 3. -01	ug/g	BEU009
			Toluene	LT 3. -01	ug/g	BEV006
			Methylhydrazine	LT 2. +02	ug/g	BE0012
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEV006
			Malathion	LT 7. -01	ug/g	BEU009
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BE0012
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BE0012
			1,4-Oxathiane	LT 3. -01	ug/g	BEU009
			Lead	1.1 +01	ug/g	BE0018
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEU009
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BEU009
			Parathion	LT 9. -01	ug/g	BEU009
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidylethyl Phosphates	LT 6. -01	ug/g	BEU009
0014	9-10	Soil	Tetrachloroethene	LT 3. -01	ug/g	BEV006
			Trichloroethene	LT 5. -01	ug/g	BEV006
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BE0012
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEV006
			Zinc	2.9 +01	ug/g	BE0018
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BEV007
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BEV007
			1,1-Dichloroethane	LT 2. +00	ug/g	BEV007
			1,2-Dichloroethane	LT 2. +00	ug/g	BEV007
			1,2-Dichloroethane	LT 6. -01	ug/g	BEV007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	9-10	Soil	m-Xylene	LT 8.	-01	BEV007
			Aldrin	LT 3.	-01	BEU010
			Arsenic	LT 2.5	+00	BEU010
			Atrazine	LT 3.	-01	BEU010
			Bicycloheptadiene	LT 4.	-01	BEV007
			Benzene	LT 3.	-01	BEV007
			Carbon Tetrachloride	LT 3.	-01	BEV007
			Cadmium	LT 7.4	-01	BEK019
			Methylene Chloride	LT 2.	+00	BEV007
			Chloroform	LT 3.	-01	BEV007
			Hexachlorocyclopentadiene	LT 6.	-01	BEU010
			Chlorobenzene	LT 1.	+00	BEV007
			Chlordane	LT 2.	+00	BEU010
			p-Chlorophenylmethyl Sulfide	LT 9.	-01	BEU010
			p-Chlorophenylmethyl Sulfoxide	LT 3.	-01	BEU010
			p-Chlorophenylmethyl Sulfone	LT 3.	-01	BEU010
			Chromium	8.1	+00	BEK019
			Copper	5.8	+00	BEK019
			Dibromochloropropane	LT 5.0	-03	BEK013
			Dibromochloropropane	LT 3.	-01	BEU010
			Dibromochloropropane	LT 2.	+00	BEV007
			Dicyclopentadiene	LT 1.	+00	BEU010
			Dicyclopentadiene	LT 7.	-01	BEV007
			Dicyclopentadiene	LT 3.	+00	BEU010
			Vapona	LT 1.	+00	BEU010
			Dilsopropylmethyl Phosphonate			
			Dithiane	LT 4.	-01	BEU010
			Dieldrin	LT 3.	-01	BEU010
			Dimethyldisulfide	LT 2.	+01	BEV007
			Endrin	LT 5.	-01	BEU010
			Ethylbenzene	LT 4.	-01	BEV007
			Mercury	LT 5.0	-02	BEK019
			Hydrazine	LT 5.	+01	BEK013
			Isodrin	LT 3.	-01	BEU010
			Toluene	LT 3.	-01	BEV007

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	9-10	Soil	Methylhydrazine	LT 2. +02	ug/g	BEU013
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEV007
			Malathion	LT 7. -01	ug/g	BEU010
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEQ013
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEQ013
			1,4-Oxethane	LT 3. -01	ug/g	BEU010
			Lead	LT 8.4 +00	ug/g	BEK019
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEU010
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BEU010
			Parathion	LT 9. -01	ug/g	BEU010
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BEU010
			Tetrachloroethene	LT 3. -01	ug/g	BEV007
			Trichloroethene	LT 5. -01	ug/g	BEV007
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BER013
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEV007
			Zinc	3.0 +01	ug/g	BEK019
0014	14-15	Soil	1,1,1-Trichloroethane	LT 4. -01	ug/g	BFF002
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BFF002
			1,1-Dichloroethane	LT 2. +00	ug/g	BFF002
			1,2-Dichloroethane	LT 2. +00	ug/g	BFF002
			1,2-Dichloroethane	LT 6. -01	ug/g	BFF002
			m-Xylene	LT 8. -01	ug/g	BFF002
			Aldrin	LT 3. -01	ug/g	BFD002
			Arsenic	LT 2.5 +00	ug/g	BFH015
			Atrazine	LT 3. -01	ug/g	BFD002
			Bicycloheptadiene	LT 4. -01	ug/g	BFF002
			Benzene	LT 3. -01	ug/g	BFF002
			Carbon Tetrachloride	LT 3. -01	ug/g	BFF002
			Cadmium	LT 7.4 -01	ug/g	BFI007
			Methylene Chloride	LT 2. +00	ug/g	BFF002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	14-15	Soil	Chloroform	LT 3. -01	ug/g	BFF002
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BFD002
			Chlorobenzene	LT 1. +00	ug/g	BFF002
			Chlordane	LT 2. +00	ug/g	BFD002
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BFD002
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BFD002
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BFD002
			Chromium	LT 6.5 +00	ug/g	BF1007
			Copper	LT 8.4 +00	ug/g	BF1007
			Dibromochloropropane	LT 5.0 -03	ug/g	BFC005
			Dibromochloropropane	LT 3. -01	ug/g	BFD002
			Dibromochloropropane	LT 2. +00	ug/g	BFF002
			Dicyclopentadiene	LT 1. +00	ug/g	BFD002
			Dicyclopentadiene	LT 7. -01	ug/g	BFF002
			Vapors	LT 3. +00	ug/g	BFD002
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BFD002
			Dithiane	LT 4. -01	ug/g	BFD002
			Dieldrin	LT 3. -01	ug/g	BFD002
			Dimethyldisulfide	LT 2. +01	ug/g	BFF002
			Endrin	LT 5. -01	ug/g	BFD002
			Ethylbenzene	LT 4. -01	ug/g	BFF002
			Mercury	LT 5.0 -02	ug/g	BFJ007
			Hydrazine	LT 5. +01	ug/g	BFB005
			Isodrin	LT 3. -01	ug/g	BFD002
			Toluene	LT 3. -01	ug/g	BFF002
			Methylhydrazine	LT 2. +02	ug/g	BFA005
			Methylisobutyl Ketone	LT 7. -01	ug/g	BFF002
			Malethion	LT 7. -01	ug/g	BFD002
			N-Nitrosodimethylamine	LT 2.6 +00	ug/g	BEY005
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEY005
			1,4-Oxathiane	LT 3. -01	ug/g	BFD002
			Lead	LT 8.4 +00	ug/g	BF1007
			Dichlorodiphenylethane	LT 6. -01	ug/g	BFD002

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	14-15	Soil	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BFD002
			Parathion	LT 9. -01	ug/g	BFD002
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BFD002
			Tetrachloroethene	LT 3. -01	ug/g	BFF002
			Trichloroethene	LT 5. -01	ug/g	BFF002
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BEZ005
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BFF002
			Zinc	3.2 +01	ug/g	BF1007
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BFF003
			1,1,2-Trichloroethane	LT 4. -01	ug/g	BFF003
			1,1-Dichloroethane	LT 2. +00	ug/g	BFF003
			1,2-Dichloroethane	LT 2. +00	ug/g	BFF003
			1,2-Dichloroethane	LT 6. -01	ug/g	BFF003
			m-Xylene	LT 8. -01	ug/g	BFF003
0014	19-20	Soil	Aldrin	LT 3. -01	ug/g	BFD003
			Arsenic	LT 2.5 +00	ug/g	BFHD16
			Atrazine	LT 3. -01	ug/g	BFD003
			Bicycloheptadiene	LT 4. -01	ug/g	BFF003
			Benzene	LT 3. -01	ug/g	BFF003
			Carbon Tetrachloride	LT 3. -01	ug/g	BFF003
			Cadmium	LT 7.4 -01	ug/g	BF1008
			Methylene Chloride	LT 2. +00	ug/g	BFF003
			Chloroform	LT 3. -01	ug/g	BFF003
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BFD003
			Chlorobenzene	LT 1. +00	ug/g	BFF003
			Chlordane	LT 2. +00	ug/g	BFD003
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BFD003
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BFD003
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BFD003
			Chromium	LT 6.5 +00	ug/g	BF1008

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	19-20	Soil	Copper	3.9 +01	ug/g	BF1008
			Dibromochloropropane	LT 5.0 -03	ug/g	BF0006
			Dibromochloropropane	LT 3. -01	ug/g	BF0003
			Dibromochloropropane	LT 2. +00	ug/g	BFF003
			Dicyclopentadiene	LT 1. +00	ug/g	BF0003
			Dicyclopentadiene	LT 7. -01	ug/g	BFF003
			Vapona	LT 3. +00	ug/g	BF0003
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BF0003
			Dithiane	LT 4. -01	ug/g	BF0003
			Dieldrin	LT 3. -01	ug/g	BF0003
			Dimethyldisulfide	LT 2. +01	ug/g	BFF003
			Endrin	LT 5. -01	ug/g	BF0003
			Ethylbenzene	LT 4. -01	ug/g	BFF003
			Mercury	LT 5.0 -02	ug/g	BFJ008
			Hydrazine	LT 5. +01	ug/g	BF8006
			Isodrin	LT 3. -01	ug/g	BF0003
			Toluene	LT 3. -01	ug/g	BFF003
			Methylhydrazine	LT 2. +02	ug/g	BFA006
			Methylisobutyl Ketone	LT 7. -01	ug/g	BFF003
			Malethion	LT 7. -01	ug/g	BF0003
			N-Nitrosodimethylamine	LT 2.6 +00	ug/g	BEY006
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEY006
			1,4-Oxathiane	LT 3. -01	ug/g	BF0003
			Lead	1.4 +01	ug/g	BF1008
			Dichlorodiphenylethane	LT 6. -01	ug/g	BF0003
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BF0003
			Parathion	LT 9. -01	ug/g	BF0003
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BF0003
			Tetrachloroethene	LT 3. -01	ug/g	BFF003
			Trichloroethene	LT 5. -01	ug/g	BFF003
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BEZ006

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Hydrazine Blending and Storage Facility

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions. Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0014	24-25	Soil	Dithiene	LT 4.	-01	BF0004
			Dieldrin	LT 3.	-01	BF0004
			Dimethyldisulfide	LT 2.	+01	BF0004
			Endrin	LT 5.	-01	BF0004
			Ethylbenzene	LT 4.	-01	BF0004
			Mercury	LT 5.0	-02	BFJ009
			Hydrazine	LT 5.	+01	BF0007
			Isodrin	LT 3.	-01	BF0004
			Toluene	LT 3.	-01	BF0004
			Methylhydrazine	LT 2.	+02	BFA007
			Methylisobutyl Ketone	LT 7.	-01	BF0004
			Malathion	LT 7.	-01	BF0004
			N-Nitrosodimethylamine	LT 2.6	+00	BEY007
			N-Nitrosodi-N-Propylamine	LT 1.0	-01	BEY007
			1,4-Oxathiane	LT 3.	-01	BF0004
			Lead	1.3	+01	BF1009
			Dichlorodiphenylethane	LT 6.	-01	BF0004
			Dichlorodiphenyltrichloroethane	LT 5.	-01	BF0004
			Parathion	LT 9.	-01	BF0004
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6.	-01	BF0004
0015	0-1	Soil	Tetrachloroethene	LT 3.	-01	BFF004
			Trichloroethene	LT 5.	-01	BFF004
			Unsymmetrical Dimethyl Hydrazine	LT 2.	+02	BEZ007
			Ortho- & Para-Xylene	LT 5.	+00	BFF004
			Zinc	9.4	+01	BF1009
			Aldrin	LT 3.	-01	BEU005
			Arsenic	LT 2.5	+00	BFH006
			Atrazine	LT 3.	-01	BEU005
			Cadmium	LT 7.4	-01	BEK014
			Hexachlorocyclopentadiene	LT 6.	-01	BEU005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0015	0-1	Soil	Chlordane	LT 2. +00	ug/g	BEU005
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BEU005
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BEU005
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BEU005
			Chromium	LT 6.5 +00	ug/g	BEK014
			Copper	8.4 +00	ug/g	BEK014
			Dibromochloropropane	LT 5.0 -03	ug/g	BEP008
			Dibromochloropropane	LT 3. -01	ug/g	BEU005
			Dicyclopentadiene	LT 1. +00	ug/g	BEU005
			Vapone	LT 3. +00	ug/g	BEU005
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BEU005
			Dithiane	LT 4. -01	ug/g	BEU005
			Dieldrin	LT 3. -01	ug/g	BEU005
			Endrin	LT 5. -01	ug/g	BEU005
			Mercury	LT 5.0 -02	ug/g	BE0014
			Hydrazine	LT 5. +01	ug/g	BE\$008
			Isodrin	LT 3. -01	ug/g	BEU005
			Methylhydrazine	LT 2. +02	ug/g	BEU008
			Malethion	LT 7. -01	ug/g	BEU005
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BE0008
0015	4-5	Soil	N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BE0008
			1,4-Oxathiane	LT 3. -01	ug/g	BEU005
			Lead	1.2 +01	ug/g	BEK014
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEU005
			Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BEU005
			Parathion	LT 9. -01	ug/g	BEU005
			2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BEU005
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BER008
			Zinc	3.7 +01	ug/g	BEK014
			1,1,1-Trichloroethane	LT 4. -01	ug/g	BEV004
			1,1,1,2-Trichloroethane	LT 4. -01	ug/g	BEV004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11. Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0015	4-5	Soil	1,1-Dichloroethane	LT 2. +00	ug/g	BEV004
			1,2-Dichloroethane	LT 2. +00	ug/g	BEV004
			1,2-Dichloroethane	LT 6. -01	ug/g	BEV004
			m-Xylene	LT 8. -01	ug/g	BEV004
			Aldrin	LT 3. -01	ug/g	BEU006
			Arsenic	LT 2.5 +00	ug/g	BFH007
			Atrazine	LT 3. -01	ug/g	BEU006
			Bicycloheptadiene	LT 4. -01	ug/g	BEV004
			Benzene	LT 3. -01	ug/g	BEV004
			Carbon Tetrachloride	LT 3. -01	ug/g	BEV004
			Cadmium	LT 7.4 -01	ug/g	BEK015
			Methylene Chloride	LT 2. +00	ug/g	BEV004
			Chloroform	LT 3. -01	ug/g	BEV004
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BEU006
			Chlorobenzene	LT 1. +00	ug/g	BEV004
			Chlordane	LT 2. +00	ug/g	BEU006
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BEU006
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BEU006
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BEU006
			Chromium	9.3 +00	ug/g	BEK015
			Copper	9.8 +00	ug/g	BEK015
			Dibromochloropropane	LT 5.0 -03	ug/g	BEP009
			Dibromochloropropane	LT 3. -01	ug/g	BEU006
			Dibromochloropropane	LT 2. +00	ug/g	BEV004
			Dicyclopentadiene	LT 1. +00	ug/g	BEU006
			Dicyclopentadiene	LT 7. -01	ug/g	BEV004
			Vapona	LT 3. +00	ug/g	BEU006
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BEU006
			Dithiane	LT 4. -01	ug/g	BEU006
			Dieldrin	LT 3. -01	ug/g	BEU006
			Dimethyldisulfide	LT 2. +01	ug/g	BEV004
			Endrin	LT 5. -01	ug/g	BEU006
			Ethylbenzene	LT 4. -01	ug/g	BEV004

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7

Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0015	4-5	Soil	Mercury	LT 5.0	-02	BE0015
			Hydrazine	LT 5.	+01	BE0009
			Isodrin	LT 3.	-01	BEU006
			Toluene	LT 3.	-01	BEV004
			Methylhydrazine	LT 2.	+02	BET009
			Methylisobutyl Ketone	LT 7.	-01	BEV004
			Malathion	LT 7.	-01	BEU006
			N-Nitrosodimethylamine	LT 2.6	-01	BE0009
			N-Nitrosodi-N-Propylamine	LT 1.0	-01	BE0009
			1,4-Oxathiane	LT 3.	-01	BEU006
			Lead	1.2	+01	BEK015
			Dichlorodiphenylethane	LT 6.	-01	BEU006
			Dichlorodiphenyltrichloroethane	LT 5.	-01	BEU006
			Parathion	LT 9.	-01	BEU006
			2-Chloro-1(2,4-Dichlorophenyl) Vinyl-diethyl Phosphates	LT 6.	-01	BEU006
0015	9-10	Soil	Tetrachloroethene	LT 3.	-01	BEV004
			Trichloroethene	LT 5.	-01	BEV004
			Unsymmetrical Dimethyl Hydrazine	LT 2.	+02	BER009
			Ortho- & Para-Xylene	LT 5.	+00	BEV004
			Zinc	4.2	+01	BEK015
			1,1,1-Trichloroethane	LT 4.	-01	BEV005
			1,1,2-Trichloroethane	LT 4.	-01	BEV005
			1,1-Dichloroethane	LT 2.	+00	BEV005
			1,2-Dichloroethane	LT 2.	+00	BEV005
			1,2-Dichloroethane	LT 6.	-01	BEV005
			m-Xylene	LT 8.	-01	BEV005
			Aldrin	LT 3.	-01	BEU007
			Arsenic	LT 2.5	+00	BFH008
			Atrazine	LT 3.	-01	BEU007
			Bicycloheptadiene	LT 4.	-01	BEV005

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0015	9-10	Soil	Benzene	LT 3. -01	ug/g	BEV005
			Carbon Tetrachloride	LT 3. -01	ug/g	BEV005
			Cadmium	LT 7.4 -01	ug/g	BEK016
			Methylene Chloride	LT 2. +00	ug/g	BEV005
			Chloroform	LT 3. -01	ug/g	BEV005
			Hexachlorocyclopentadiene	LT 6. -01	ug/g	BEU007
			Chlorobenzene	LT 1. +00	ug/g	BEV005
			Chlordane	LT 2. +00	ug/g	BEU007
			p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BEU007
			p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BEU007
			p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BEU007
			Chromium	LT 9.3 +00	ug/g	BEK016
			Copper	7.6 +00	ug/g	BEK016
			Dibromochloropropene	LT 5.0 -03	ug/g	BEP010
			Dibromochloropropene	LT 3. -01	ug/g	BEU007
			Dibromochloropropene	LT 2. +00	ug/g	BEV005
			Dicyclopentadiene	LT 1. +00	ug/g	BEU007
			Dicyclopentadiene	LT 7. -01	ug/g	BEV005
			Vapona	LT 3. +00	ug/g	BEU007
			Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BEU007
			Dithione	LT 4. -01	ug/g	BEU007
			Dieldrin	LT 3. -01	ug/g	BEU007
			Dimethyldisulfide	LT 2. +01	ug/g	BEV005
			Endrin	LT 5. -01	ug/g	BEU007
			Ethylbenzene	LT 4. -01	ug/g	BEV005
			Mercury	LT 5.0 -02	ug/g	BEK016
			Hydrazine	LT 5. +01	ug/g	BEK010
			Isodrin	LT 3. -01	ug/g	BEU007
			Toluene	LT 3. -01	ug/g	BEV005
			Methylhydrazine	LT 2. +02	ug/g	BEK010
			Methylisobutyl Ketone	LT 7. -01	ug/g	BEV005
			Malethion	LT 7. -01	ug/g	BEU007
			N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEK010
			N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEK010

Note: Results for Dibromochloropropene (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Task 11, Site 1-7 Hydrazine Blending and Storage Facility

Boring Number	Depth (ft)	Sample Type	Analytical Parameters	Results	Units	Sample Number
0015	9-10	Soil	1,4-Oxathiane	LT 3. -01	ug/g	BEU007
			Lead	LT 8.4 +00	ug/g	BEK016
			Dichlorodiphenylethane	LT 6. -01	ug/g	BEU007
			Dichlorodiphenyltrichloroethene	LT 5. -01	ug/g	BEU007
			Parathion	LT 9. -01	ug/g	BEU007
			2-Chloro-1(2,4-Dichlorophenyl)vinylethane	LT 6. -01	ug/g	BEU007
			Tetrachloroethene	LT 3. -01	ug/g	BEV005
			Trichloroethene	LT 5. -01	ug/g	BEV005
			Unsymmetrical Dimethyl Hydrazine	LT 2. +02	ug/g	BER010
			Ortho- & Para-Xylene	LT 5. +00	ug/g	BEV005
			Zinc	3.8 +01	ug/g	BEK016

Note: Results for Dibromochloropropane (DBCP) may appear in up to three analytical fractions.
 Results for Dicyclopentadiene (DCPD) may appear in up to two analytical fractions.

Summary of Analytical Results

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Hydrazine	LT 5.0 +01	ug/g	88G001
Blank	Unsymmetrical Dimethyl Hydrazine	LT 2.0 +02	ug/g	88M001
Blank	N-Nitrosodimethylamine	LT 2.6 -01	ug/g	88I001
Blank	N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	88I001
Blank	Methylhydrazine	LT 2.0 +02	ug/g	88J001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	88K001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	88L001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	88L001
Blank	Chloroform	LT 3. -01	ug/g	88L001
Blank	Chlorobenzene	LT 1. +00	ug/g	88L001
Blank	Benzene	LT 3. -01	ug/g	88L001
Blank	Dibromochloropropane	LT 2. +00	ug/g	88L001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	88L001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	88L001
Blank	Ethylbenzene	LT 4. -01	ug/g	88L001
Blank	Toluene	LT 3. -01	ug/g	88L001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	88L001
Blank	Tetrachloroethene	LT 3. -01	ug/g	88L001
Blank	Trichloroethene	LT 5. -01	ug/g	88L001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	88L001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	88L001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	88L001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	88L001
Blank	1,2-Dichloroethane	LT 2. +00	ug/g	88L001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	88L001
Blank	m-Xylene	LT 8. -01	ug/g	88L001
Blank	Methylene Chloride	GT 2.5 +01	ug/g	88L001
Blank	Aldrin	LT 3. -01	ug/g	88M001
Blank	Atrazine	LT 3. -01	ug/g	88M001
Blank	Chlordane	LT 2. +00	ug/g	88M001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	88M001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	88M001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	88M001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BBM001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BBM001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BBM001
Blank	Vapona	LT 3. +00	ug/g	BBM001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BBM001
Blank	Dithiane	LT 4. -01	ug/g	BBM001
Blank	Dieldrin	LT 3. -01	ug/g	BBM001
Blank	Endrin	LT 5. -01	ug/g	BBM001
Blank	Isodrin	LT 3. -01	ug/g	BBM001
Blank	Malethion	LT 7. -01	ug/g	BBM001
Blank	1,4-Oxethane	LT 3. -01	ug/g	BBM001
Blank	Bichlorodiphenylethane	LT 6. -01	ug/g	BBM001
Blank	Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BBM001
Blank	Parathion	LT 9. -01	ug/g	BBM001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BBM001
Blank	Arsenic	3.0 +00	ug/g	BBN001
Blank	Mercury	LT 5.0 -02	ug/g	BB0001
Blank	Cadmium	LT 7.4 -01	ug/g	BBP001
Blank	Chromium	1.5 +01	ug/g	BBP001
Blank	Copper	1.1 +01	ug/g	BBP001
Blank	Lead	1.2 +01	ug/g	BBP001
Blank	Zinc	4.1 +01	ug/g	BBP001
Blank	Unsymmetrical Dimethyl Hydrazine	LT 2.0 +02	ug/g	BBX001
Blank	Methylhydrazine	LT 2.0 +02	ug/g	BBY001
Blank	Hydrazine	LT 5.0 +01	ug/g	BBZ001
Blank	N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCA001
Blank	N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCA001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BCC001
Blank	Aldrin	LT 3. -01	ug/g	BCD001
Blank	Atrazine	LT 3. -01	ug/g	BCD001
Blank	Chlordane	LT 2. +00	ug/g	BCD001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCD001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCD001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCD001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCD001
Blank	Dibromochloropropene	LT 3. -01	ug/g	BCD001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BCD001
Blank	Vapone	LT 3. +00	ug/g	BCD001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCD001
Blank	Dithiane	LT 4. -01	ug/g	BCD001
Blank	Dieldrin	LT 3. -01	ug/g	BCD001
Blank	Endrin	LT 5. -01	ug/g	BCD001
Blank	Isodrin	LT 3. -01	ug/g	BCD001
Blank	Malethion	LT 7. -01	ug/g	BCD001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BCD001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BCD001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCD001
Blank	Parathion	LT 9. -01	ug/g	BCD001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BCD001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BCE001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BCE001
Blank	Chloroform	LT 3. -01	ug/g	BCE001
Blank	Chlorobenzene	LT 1. +00	ug/g	BCE001
Blank	Benzene	LT 3. -01	ug/g	BCE001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BCE001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BCE001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BCE001
Blank	Ethylbenzene	LT 4. -01	ug/g	BCE001
Blank	Toluene	LT 3. -01	ug/g	BCE001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BCE001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BCE001
Blank	Trichloroethene	LT 5. -01	ug/g	BCE001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

11/07/86

Rocky Mountain Arsenal Program

Elasco Services Incorporated Blanks Associated with Task 11, Site 1-7
Summary of Analytical Results Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BCE001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BCE001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BCE001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BCE001
Blank	1,2-Dichloroethane	LT 2. +00	ug/g	BCE001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BCE001
Blank	m-Xylene	LT 8. -01	ug/g	BCE001
Blank	Methylene Chloride	6.4 +00	ug/g	BCE001
Blank	N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BCN001
Blank	N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BCN001
Blank	Unsymmetrical Dimethyl Hydrazine	LT 2.0 +02	ug/g	BCO001
Blank	Methylhydrazine	LT 2.0 +02	ug/g	BCP001
Blank	Hydrazine	LT 5.0 +01	ug/g	BCO001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BCR001
Blank	Aldrin	LT 3. -01	ug/g	BCS001
Blank	Atrazine	LT 3. -01	ug/g	BCS001
Blank	Chlordane	LT 2. +00	ug/g	BCS001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCS001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCS001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCS001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCS001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BCS001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BCS001
Blank	Vapone	LT 3. +00	ug/g	BCS001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCS001
Blank	Dithlene	LT 4. -01	ug/g	BCS001
Blank	Dieldrin	LT 3. -01	ug/g	BCS001
Blank	Endrin	LT 5. -01	ug/g	BCS001
Blank	Isodrin	LT 3. -01	ug/g	BCS001
Blank	Malathion	LT 7. -01	ug/g	BCS001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BCS001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BCS001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCS001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Summary of Analytical Results
 Blanks Associated with Task 11. Site 1-7
 Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Parathion	LT 9. -01	ug/g	BCS001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidylethyl Phosphates	LT 6. -01	ug/g	BCS001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BC1001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BC1001
Blank	Chloroform	LT 3. -01	ug/g	BC1001
Blank	Methylene Chloride	LT 2. +00	ug/g	BC1001
Blank	Chlorobenzene	LT 1. +00	ug/g	BC1001
Blank	Benzene	LT 3. -01	ug/g	BC1001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BC1001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BC1001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BC1001
Blank	Ethylbenzene	LT 4. -01	ug/g	BC1001
Blank	Toluene	LT 3. -01	ug/g	BC1001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BC1001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BC1001
Blank	Trichloroethene	LT 5. -01	ug/g	BC1001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BC1001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BC1001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BC1001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BC1001
Blank	1,2-Dichloroethane	LT 2. +00	ug/g	BC1001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BC1001
Blank	m-Xylene	LT 8. -01	ug/g	BC1001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BCU001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BCU001
Blank	Methylene Chloride	LT 2. +00	ug/g	BCU001
Blank	Chlorobenzene	LT 1. +00	ug/g	BCU001
Blank	Benzene	LT 3. -01	ug/g	BCU001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BCU001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BCU001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BCU001
Blank	Ethylbenzene	LT 4. -01	ug/g	BCU001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Summary of Analytical Results

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Toluene	LT 3. -01	ug/g	BCU001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BCU001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BCU001
Blank	Trichloroethene	LT 5. -01	ug/g	BCU001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BCU001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BCU001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BCU001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BCU001
Blank	1,2-Dichloroethane	LT 2. +00	ug/g	BCU001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BCU001
Blank	m-Xylene	LT 8. -01	ug/g	BCU001
Blank	Chloroform	LT 3. -01	ug/g	BCU001
Blank	Aldrin	LT 3. -01	ug/g	BCV001
Blank	Atrazine	LT 3. -01	ug/g	BCV001
Blank	Chlordane	LT 2. +00	ug/g	BCV001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BCV001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BCV001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BCV001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BCV001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BCV001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BCV001
Blank	Vapona	LT 3. +00	ug/g	BCV001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BCV001
Blank	Dithiane	LT 4. -01	ug/g	BCV001
Blank	Dieldrin	LT 3. -01	ug/g	BCV001
Blank	Endrin	LT 5. -01	ug/g	BCV001
Blank	Isodrin	LT 3. -01	ug/g	BCV001
Blank	Malathion	LT 7. -01	ug/g	BCV001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BCV001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BCV001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BCV001
Blank	Perathion	LT 9. -01	ug/g	BCV001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinyl diethyl Phosphates	LT 6. -01	ug/g	BCV001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

11/07/86

Ebasco Services Incorporated
 Summary of Analytical Results
 Rocky Mountain Arsenal Program
 Blanks Associated with Task 11, Site 1-7
 Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Cadmium	LT 7.4 -01	ug/g	BCX001
Blank	Chromium	1.5 +01	ug/g	BCX001
Blank	Copper	1.1 +01	ug/g	BCX001
Blank	Lead	LT 8.4 +00	ug/g	BCX001
Blank	Zinc	4.2 +01	ug/g	BCX001
Blank	Mercury	LT 5.0 -02	ug/g	BCY001
Blank	Arsenic	LT 2.5 +00	ug/g	BDC001
Blank	Bicycloheptadiene	LT 3. -01	ug/g	BDM001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BDM001
Blank	Chloroform	LT 3. -01	ug/g	BDM001
Blank	Methylene Chloride	LT 7. -01	ug/g	BDM001
Blank	Chlorobenzene	LT 3. -01	ug/g	BDM001
Blank	Benzene	LT 3. -01	ug/g	BDM001
Blank	Dibromochloropropane	LT 4. -01	ug/g	BDM001
Blank	Dicyclopentadiene	LT 3. -01	ug/g	BDM001
Blank	Dimethyldisulfide	LT 8. -01	ug/g	BDM001
Blank	Ethylbenzene	LT 3. -01	ug/g	BDM001
Blank	Toluene	LT 3. -01	ug/g	BDM001
Blank	Methylisobutyl Ketone	LT 3. -01	ug/g	BDM001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BDM001
Blank	Trichloroethene	LT 3. -01	ug/g	BDM001
Blank	Ortho- & Para-Xylene	LT 3. -01	ug/g	BDM001
Blank	1,1-Dichloroethane	LT 9. -01	ug/g	BDM001
Blank	1,1,1-Trichloroethane	LT 3. -01	ug/g	BDM001
Blank	1,1,2-Trichloroethane	LT 3. -01	ug/g	BDM001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	BDM001
Blank	1,2-Dichloroethane	LT 3. -01	ug/g	BDM001
Blank	m-Xylene	LT 7. -01	ug/g	BDM001
Blank	Aldrin	LT 3. -01	ug/g	BDP001
Blank	Atrazine	LT 3. -01	ug/g	BDP001
Blank	Chlordane	LT 6. -01	ug/g	BDP001
Blank	Hexachlorocyclopentadiene	LT 3. -01	ug/g	BDP001
Blank	p-Chlorophenylmethyl Sulfide	LT 4. +00	ug/g	BDP001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	p-Chlorophenylmethyl Sulfoxide	LT 7. +00	ug/g	BDP001
Blank	p-Chlorophenylmethyl Sulfone	LT 6. -01	ug/g	BDP001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BDP001
Blank	Dicyclopentadiene	LT 4. -01	ug/g	BDP001
Blank	Vapone	LT 3. -01	ug/g	BDP001
Blank	Diisopropylmethyl Phosphonate	LT 3. -01	ug/g	BDP001
Blank	Dithiane	LT 7. +00	ug/g	BDP001
Blank	Dieldrin	LT 3. -01	ug/g	BDP001
Blank	Endrin	LT 3. -01	ug/g	BDP001
Blank	Isodrin	LT 3. -01	ug/g	BDP001
Blank	Malathion	LT 3. -01	ug/g	BDP001
Blank	1,4-Oxathiane	LT 6. +00	ug/g	BDP001
Blank	Dichlorodiphenylethane	LT 3. -01	ug/g	BDP001
Blank	Dichlorodiphenyltrichloro-ethane	LT 6. -01	ug/g	BDP001
Blank	Parathion	LT 4. -01	ug/g	BDP001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 3. -01	ug/g	BDP001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BD0001
Blank	Unsymmetrical Dimethyl Hydrazine	LT 2.0 +02	ug/g	BDR001
Blank	Methylhydrazine	LT 2.0 +02	ug/g	BDS001
Blank	Hydrazine	LT 5.0 +01	ug/g	BDT001
Blank	N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BDU001
Blank	Hydrazine	LT 5.0 +01	ug/g	BDY001
Blank	Methylhydrazine	LT 2.0 +02	ug/g	BDZ001
Blank	Unsymmetrical Dimethyl Hydrazine	LT 2.0 +02	ug/g	BEA001
Blank	N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEB001
Blank	N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEB001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BEC001
Blank	Aldrin	LT 3. -01	ug/g	BED001
Blank	Atrazine	LT 3. -01	ug/g	BED001
Blank	Chlordane	LT 2. +00	ug/g	BED001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Summary of Analytical Results

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BED001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BED001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BED001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BED001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BED001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BED001
Blank	Vapone	LT 3. +00	ug/g	BED001
Blank	Disopropylmethyl Phosphonate	LT 1. +00	ug/g	BED001
Blank	Dithiane	LT 4. -01	ug/g	BED001
Blank	Dieldrin	LT 3. -01	ug/g	BED001
Blank	Endrin	LT 5. -01	ug/g	BED001
Blank	Isodrin	LT 3. -01	ug/g	BED001
Blank	Malethion	LT 7. -01	ug/g	BED001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BED001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BED001
Blank	Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BED001
Blank	Parathion	LT 9. -01	ug/g	BED001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BED001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BEG001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BEG001
Blank	Chloroform	LT 3. -01	ug/g	BEG001
Blank	Methylene Chloride	LT 2. +00	ug/g	BEG001
Blank	Chlorobenzene	LT 1. +00	ug/g	BEG001
Blank	Benzene	LT 3. -01	ug/g	BEG001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BEG001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BEG001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BEG001
Blank	Ethylbenzene	LT 4. -01	ug/g	BEG001
Blank	Toluene	LT 3. -01	ug/g	BEG001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BEG001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BEG001
Blank	Trichloroethene	LT 5. -01	ug/g	BEG001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Rocky Mountain Arsenal Program

Ebasco Services Incorporated

Summary of Analytical Results

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BEG001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BEG001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BEG001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BEG001
Blank	1,2-Dichloroethane	LT 2. +00	ug/g	BEG001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BEG001
Blank	m-Xylene	LT 8. -01	ug/g	BEG001
Blank	Cadmium	LT 7.4 -01	ug/g	BEK001
Blank	Chromium	1.1 +01	ug/g	BEK001
Blank	Copper	1.0 +01	ug/g	BEK001
Blank	Lead	1.4 +01	ug/g	BEK001
Blank	Zinc	4.5 +01	ug/g	BEK001
Blank	Mercury	5.8 -02	ug/g	BE0001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BE0001
Blank	N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BE0001
Blank	N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BE0001
Blank	Unsymmetrical Dimethyl Hydrazine	LT 2.0 +02	ug/g	BE0001
Blank	Hydrazine	LT 5.0 +01	ug/g	BE0001
Blank	Methylhydrazine	LT 2.0 +02	ug/g	BE0001
Blank	Aldrin	LT 3. -01	ug/g	BE0001
Blank	Atrazine	LT 3. -01	ug/g	BE0001
Blank	Chlordane	LT 2. +00	ug/g	BE0001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BE0001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BE0001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BE0001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BE0001
Blank	Dibromochloropropane	LT 3. -01	ug/g	BE0001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BE0001
Blank	Vapona	LT 3. +00	ug/g	BE0001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BE0001
Blank	Dithlene	LT 4. -01	ug/g	BE0001
Blank	Dieldrin	LT 3. -01	ug/g	BE0001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

11/07/86

Ebasco Services Incorporated

Rocky Mountain Arsenal Program

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Summary of Analytical Results

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Endrin	LT 5. -01	ug/g	BEU001
Blank	Isodrin	LT 3. -01	ug/g	BEU001
Blank	Malathion	LT 7. -01	ug/g	BEU001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BEU001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BEU001
Blank	Dichlorodiphenyltrichloroethane	LT 5. -01	ug/g	BEU001
Blank	Perathion	LT 9. -01	ug/g	BEU001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidethyl Phosphates	LT 6. -01	ug/g	BEU001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BEV001
Blank	Carbon Tetrachloride	LT 3. -01	ug/g	BEV001
Blank	Chloroform	LT 3. -01	ug/g	BEV001
Blank	Methylene Chloride	LT 2. +00	ug/g	BEV001
Blank	Chlorobenzene	LT 1. +00	ug/g	BEV001
Blank	Benzene	LT 3. -01	ug/g	BEV001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BEV001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BEV001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BEV001
Blank	Ethylbenzene	LT 4. -01	ug/g	BEV001
Blank	Toluene	LT 3. -01	ug/g	BEV001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BEV001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BEV001
Blank	Trichloroethene	LT 5. -01	ug/g	BEV001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BEV001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BEV001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BEV001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BEV001
Blank	1,2-Dichloroethene	LT 2. +00	ug/g	BEV001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BEV001
Blank	m-Xylene	LT 8. -01	ug/g	BEV001
Blank	N-Nitrosodimethylamine	LT 2.6 -01	ug/g	BEY001
Blank	N-Nitrosodi-N-Propylamine	LT 1.0 -01	ug/g	BEY001
Blank	Unsymmetrical Dimethyl Hydrazine	LT 2.0 +02	ug/g	BEZ001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Methylhydrazine	LT 2.0 +02	ug/g	BFAD001
Blank	Hydrazine	LT 5.0 +01	ug/g	BF8001
Blank	Dibromochloropropane	LT 5.0 -03	ug/g	BFCD001
Blank	Aldrin	LT 3. -01	ug/g	BFDD001
Blank	Atrazine	LT 3. -01	ug/g	BFDD001
Blank	Chlordane	LT 2. +00	ug/g	BFDD001
Blank	Hexachlorocyclopentadiene	LT 6. -01	ug/g	BFDD001
Blank	p-Chlorophenylmethyl Sulfide	LT 9. -01	ug/g	BFDD001
Blank	p-Chlorophenylmethyl Sulfoxide	LT 3. -01	ug/g	BFDD001
Blank	p-Chlorophenylmethyl Sulfone	LT 3. -01	ug/g	BFDD001
Blank	Dibromochloropropane	LT 1. -01	ug/g	BFDD001
Blank	Dicyclopentadiene	LT 1. +00	ug/g	BFDD001
Blank	Vapona	LT 3. +00	ug/g	BFDD001
Blank	Diisopropylmethyl Phosphonate	LT 1. +00	ug/g	BFDD001
Blank	Dithiane	LT 4. -01	ug/g	BFDD001
Blank	Dieldrin	LT 3. -01	ug/g	BFDD001
Blank	Endrin	LT 5. -01	ug/g	BFDD001
Blank	Isodrin	LT 3. -01	ug/g	BFDD001
Blank	Malathion	LT 7. -01	ug/g	BFDD001
Blank	1,4-Oxathiane	LT 3. -01	ug/g	BFDD001
Blank	Dichlorodiphenylethane	LT 6. -01	ug/g	BFDD001
Blank	Dichlorodiphenyltrichloro-ethane	LT 5. -01	ug/g	BFDD001
Blank	Parathion	LT 9. -01	ug/g	BFDD001
Blank	2-Chloro-1(2,4-Dichlorophenyl) Vinylidylethyl Phosphates	LT 6. -01	ug/g	BFDD001
Blank	Bicycloheptadiene	LT 4. -01	ug/g	BFDD001
Blank	Carbon tetrachloride	LT 3. -01	ug/g	BFDD001
Blank	Chloroform	LT 3. -01	ug/g	BFDD001
Blank	Methylene Chloride	LT 2. +00	ug/g	BFDD001
Blank	Chlorobenzene	LT 1. +00	ug/g	BFDD001
Blank	Benzene	LT 3. -01	ug/g	BFDD001
Blank	Dibromochloropropane	LT 2. +00	ug/g	BFDD001
Blank	Dicyclopentadiene	LT 7. -01	ug/g	BFDD001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

11/07/86

Ebasco Services Incorporated

Rocky Mountain Arsenal Program

Blanks Associated with Task 11, Site 1-7
Hydrazine Blending and Storage Facility

Summary of Analytical Results

Type	Analytical Parameters	Results	Units	Sample Number
Blank	Ethylbenzene	LT 4. -01	ug/g	BFF001
Blank	Toluene	LT 3. -01	ug/g	BFF001
Blank	Methylisobutyl Ketone	LT 7. -01	ug/g	BFF001
Blank	Tetrachloroethene	LT 3. -01	ug/g	BFF001
Blank	Trichloroethene	LT 5. -01	ug/g	BFF001
Blank	Ortho- & Para-Xylene	LT 5. +00	ug/g	BFF001
Blank	1,1-Dichloroethane	LT 2. +00	ug/g	BFF001
Blank	1,1,1-Trichloroethane	LT 4. -01	ug/g	BFF001
Blank	1,1,2-Trichloroethane	LT 4. -01	ug/g	BFF001
Blank	1,2-Dichloroethane	LT 2. +00	ug/g	BFF001
Blank	1,2-Dichloroethane	LT 6. -01	ug/g	BFF001
Blank	m-Xylene	LT 8. -01	ug/g	BFF001
Blank	Dimethyldisulfide	LT 2. +01	ug/g	BFF001
Blank	Arsenic	LT 2.8 +00	ug/g	BFF001
Blank	Cadmium	LT 7.4 -01	ug/g	BFF001
Blank	Chromium	LT 8.1 +00	ug/g	BFF001
Blank	Copper	LT 9.6 +00	ug/g	BFF001
Blank	Lead	LT 8.4 +00	ug/g	BFF001
Blank	Zinc	LT 3.7 +01	ug/g	BFF001
Blank	Mercury	LT 5.0 -02	ug/g	BFF001

Note: Blanks are matched to analytical lots by the first three characters in the Sample Number.

APPENDIX 1-7-C

HISTORICAL WATER QUALITY DATA

APPENDIX C
Historical Water Quality Data

Historical water quality records for nine of the twelve wells samples in the field program, Phase I, Task 11 are summarized in the Appendix. There are no historical water quality data for monitoring wells 01701, 01702, 31002 and 36075. ND indicates not detected, while a blank indicates not analyzed.

APPENDIX C

Table 1-7-C1. Historical Water Quality Data for Well 01008

ANALYTES (us/L)	9/13/84	1/7/85	1/14/86	5/13/86
Volatile Organics				
carbon tetrachloride			ND	2.2
chloroform		24.0	4.95	6.2
1,1-dichloroethane				ND
organic compounds, total		10,000		
trichloroethylene			1.6	2.4
1,1,1-trichloroethylene			ND	ND
1,1,2-trichloroethylene			ND	ND
Semi-Volatile Organics				
aldrin			ND	
chlorophenylmethyl sulfide (CPMS)			ND	
chlorophenylmethyl sulfone (CPMSO)			ND	
chlorophenylmethyl sulfoxide (CPMSO2)			ND	
1,2 dibromo-3-chloropropane (DBCP)	ND		ND	ND
dicyclopentadiene (DCPD)	ND		ND	ND
dieldrin			0.2	
diisopropylmethyl phosphonate (DIMP)	ND		ND	
endrin			ND	
isodrin			ND	
1,4-oxathiane	3,930	3,890	ND	3,100
p'p'DDE		0.61	ND	
p'p'DDT		0.16	ND	
Hydrazines				
1,1-dimethylhydrazine (UDMH)			60	
hydrazine (H)			6	
methylhydrazine (MNH)			70	
Anions				
chloride	124,000	131,000	153,000	120,000
fluoride	4,000	6,000	3460	6,100
nitrate	2,800,000	11,000		
sulfate	92,700	395,000	569,000	55,000
nitrate/nitrite			11,000	13,000
Metals				
calcium	71,200	81,900	106,000	77,000
potassium	3,930	3,890	4,560	
arsenic, total			11	
mercury, total			ND	ND
sodium	333,000	361,000	385,000	300,000
magnesium	33,200	32,100	39,700	
chromium, total			6.9	
zinc, total			42	

APPENDIX C

Table 1-7-C2. Historical Water Quality Data for Well 01019

ANALYTES (ug/L)	DATE SAMPLED					5/14/86
	1/17/79	1/18/79	3/22/79	2/9/84	1/10/86	
<u>Volatile Organics</u>						
carbon tetrachloride						
chlorobenzene						
chloroform						
1,1,2-dichloroethane						
1,1-dichloroethane						
organic compounds, total						
trichloroethylene						
1,1,1-trichloroethylene						
1,1,1,2-trichloroethylene						
<u>Semi-Volatile Organics</u>						
aldrin						
chlorophenylmethyl sulfide (CPMS)						
chlorophenylmethyl sulfone (CPMSO)						
chlorophenylmethyl sulfoxide (CPMSO2)						
1,1,2 dibromo-3-chloropropane (DBCP)						
dicyclopentadiene (DCPD)						
dieldrin						
diisopropylmethyl phosphonate (DIMP)						
dithiane						
endrin						
isodrin						
1,4-oxathiane						
p,p'-DDE						
p,p'-DDT						
<u>Hydrazines</u>						
1,1-dimethylhydrazine (UDMH)						
hydrazine (H)						
monomethylhydrazine (MMH)						
<u>Anions</u>						
chloride						
fluoride						
nitrate						
sulfate						
nitrate/nitrite						
<u>Metals</u>						
calcium						
copper						
magnesium						
potassium						
arsenic, total						
mercury, total						
sodium						
zinc						

APPENDIX C

Table 1-7-C3. Historical Water Quality Data for Well 01C36

ANALYTES (ug/l)	5/2/83	DATE SAMPLED
5/13/86		
Volatiles Organics		
benzene	ND	ND
carbon tetrachloride	ND	ND
chlorobenzene	ND	ND
chloroform	10.0	9.1
dichlorobenzene	ND	ND
1,1-dichloroethane	ND	ND
1,2-dichloroethane	ND	ND
methyl isobutyl ketone (MIBK)	ND	ND
tetrachloroethylene	ND	ND
toluene	ND	ND
organic compounds, total	ND	ND
trichloroethylene	ND	ND
1,1,1-trichloroethylene	ND	ND
1,1,2-trichloroethylene	ND	ND
xylene	ND	ND
Semi-Volatile Organics		
aldrin	ND	ND
bicyclo (2,2,1) hepta-2,5-diene	ND	ND
chlorophenylmethyl sulfide (CPMS)	ND	ND
chlorophenylmethyl sulfone (CPMSO)	ND	ND
chlorophenylmethyl sulfoxide (CPMSO2)	ND	ND
1,2 dibromo-3-chloropropane (DBCP)	0.7	0.83
dicyclopentadiene (DCPD)	ND	ND
dieldrin	ND	ND
diisopropylmethyl phosphonate (DIMP)	ND	ND
dithiane	ND	ND
endrin	ND	ND
isodrin	ND	ND
1,4-oxathiane	ND	ND
p'p'DDE	ND	ND
p'p'DDT	ND	ND
Hydrazines		
1,1-dimethylhydrazine (UDMH)	50	50
hydrazine (H)	3	3
methylhydrazine (MMH)	50	50
Anions		
chloride	100,000	90,000
fluoride		1,500
nitrate/nitrite		45,000
sulfate		210,000
Metals		
calcium	161,000	120,000
copper	ND	ND
magnesium	33,900	38,000
potassium		3,000
sodium		45,000
zinc		ND

APPENDIX C

Table 1-7-C4. Historical Water Quality Data for Well 01051

ANALYTES (ug/L)	DATE SAMPLED	DATE SAMPLED
1-7/85	5/13/86	
<u>Volatiles Organics</u>		
carbon tetrachloride	ND	ND
chloroform	18.0	4.8
organic compounds, total	10,800	0.96
trichloroethylene	ND	ND
1,1,1-trichloroethylene	ND	ND
1,1,2-trichloroethylene	ND	ND
<u>Semi-Volatile Organics</u>		
aldrin	ND	ND
chlorophenylmethyl sulfide (CPMS)	ND	ND
chlorophenylmethyl sulfone (CPMSO)	ND	ND
chlorophenylmethyl sulfoxide (CPMSO2)	ND	ND
1,1 dichloroethylene	ND	3.9
1,2 dibromo-3-chloropropane (DBCP)	ND	ND
dicyclopentadiene (DCPD)	ND	ND
dieldrin	ND	ND
diisopropylmethyl phosphonate (DIMP)	ND	ND
dithiane	ND	ND
endrin	ND	ND
isodrin	ND	ND
1,4-oxathiane	ND	ND
p,p'DDE	7.1	ND
p,p'DDT	ND	ND
<u>Hydrazines</u>		
1,1-dimethylhydrazine (UDMH)		100
hydrazine (H)		10
methylhydrazine (MMH)		100
<u>Nitrosamines</u>		
n-nitrosodimethylamine (NNDMEA)		ND
<u>Anions</u>		
chloride	165,000	120,000
fluoride	3,000	4,800
nitrate	34,000	550,000
sulfate	536,000	35,000
nitrate/nitrite		
<u>Metals</u>		
calcium	287,000	150,000
potassium	4,700	3,800
arsenic, total	ND	
mercury, total	ND	
sodium	288,000	270,000
magnesium	57,000	50,000

APPENDIX C

Table 1-7-C5. Historical Water Quality Data for Well 01052

ANALYTES (ug/L)	DATE SAMPLED	
Volatiles Organics	1/7/85	5/13/86
carbon tetrachloride	ND	ND
chloroform	12.0	1.8
dichloroethane		
organic compounds, total	4,600	ND
trichloroethylene		ND
1,1,1-trichloroethylene		ND
1,1,2-trichloroethylene		ND
Semi-Volatile Organics		
aldrin	ND	ND
chlorophenylmethyl sulfide (CPMS)	ND	ND
chlorophenylmethyl sulfone (CPMSO)	ND	ND
chlorophenylmethyl sulfoxide (CPMSO2)	ND	ND
1,2 dibromo-3-chloropropane (DBCP)	ND	ND
dicyclopentadiene (DCPD)	ND	ND
dieldrin	ND	ND
diisopropylmethyl phosphonate (DIMP)	ND	ND
dithiane	ND	ND
endrin	ND	ND
isodrin	ND	ND
1,4-oxathiane	ND	ND
p'p'DDE	ND	ND
p'p'DDT	ND	ND
Hydrazines		
1,1-dimethylhydrazine (UDMH)	ND	ND
hydrazine (H)	ND	ND
methylhydrazine (MH)	30.0	
Anions		
chloride	149.0	150,000
fluoride	1.5	2,500
nitrate	13,000	
sulfate	221,000	180,000
nitrate/nitrite		15,000
Metals		
calcium	185,000	110,000
potassium	3,730	2,300
arsenic, total	ND	
magnesium	37,900	38,000
mercury, total	ND	
sodium	100,000	110,000
copper		ND
zinc		ND

APPENDIX C

Table 1-7-C6. Historical Water Quality Data for Well 01053

ANALYTES (ug/L)	DATE SAMPLED	
	1-/85	5/13/86
Volatiles Organic		
carbon tetrachloride	ND	ND
chloroform	35.0	7.6
organic compounds, organic	4,500	1.1
trichloroethylene	ND	ND
1,1,1-trichloroethylene	ND	ND
1,1,2-trichloroethylene	ND	ND
Semi-Volatile Organic		
aldrin	ND	ND
chlorophenylmethyl sulfide (CPMS)	ND	ND
chlorophenylmethyl sulfone (CPMSO)	ND	ND
chlorophenylmethyl sulfoxide (CPMSO2)	ND	ND
1,2 dibromo-3-chloropropane (DBCP)	ND	ND
dicyclopentadiene (DCPD)	ND	ND
dieldrin	ND	ND
diisopropylmethyl phosphonate (DIMP)	ND	ND
dithiane	ND	ND
endrin	ND	ND
isodrin	ND	ND
1,4-oxathiane	ND	ND
p'p'DDE	ND	ND
p'p'DDT	ND	ND
Hydrazines		
1,1-dimethylhydrazine (UDMH)	50	50
hydrazine (H)	5	5
methylhydrazine (MH)	40	40
Nitrosamines		
n-nitrosodimethylamine (NNDMEA)	ND	ND
Anions		
chloride	110,000	110,000
fluoride	3,000	4,500
nitrate	17,000	370,000
sulfate	365,000	15,000
nitrate/nitrite		
Metals		
calcium	80,200	66,000
potassium	3,330	2,400
arsenic, total	ND	24,000
magnesium	30,700	24,000
mercury, total	ND	230,000
sodium	254,000	ND
copper		ND
zinc		ND

zinc

ND
23.0

APPENDIX C

Table 1-7-C8. Historical Water Quality Data for Well 01055

ANALYTES (ug/L)	DATE SAMPLED 1.7/85	(Replicate) 5/12/86
Volatile Organics		
carbon tetrachloride	3.1	2.9
chloroform	61,000	140.0
dichloroethane	21	20
organic compounds, total	ND	ND
trichloroethylene	1.3	1.2
1,1,1-trichloroethylene		
1,1,2-trichloroethylene		
Semi-Volatile Organics		
aldrin	ND	ND
chlorophenylethyl sulfide (CPMS)	ND	ND
chlorophenylethyl sulfone (CPMSO)	ND	ND
chlorophenylethyl sulfoxide (CPMSO2)	ND	ND
1,2 dibromo-3-chloropropane (DBCP)	0.5	0.59
dicyclopentadiene (DCPD)	ND	ND
dieldrin	ND	ND
diisopropylmethyl phosphonate (DIMP)	ND	ND
dithiane	ND	ND
endrin	ND	ND
isodrin	ND	ND
1,4-oxathiane	ND	ND
p'p'DDE	48.0	ND
p'p'DDT	ND	ND
Hydrazines		
1,1-dimethylhydrazine (UDMH)	30	30
hydrazine (H)	7	4
methylhydrazine (MMH)	100	80
Nitrosamines		
n-nitrosodimethylamine	2.0	1.8
Anions		
chloride	124,000	130,000
fluoride	2,300	3,800
nitrate	24,000	3,900
sulfate	327,000	380,000
nitrate/nitrite	20,000	19,000
Metals		
calcium	2,340,000	120,000
potassium	3,890	3,400
arsenic, total	ND	3,200
magnesium	48,400	46,000
mercury, total	ND	46,000
sodium	225,000	190,000
zinc	23.0	ND

APPENDIX C

Water Quality Data for Well 01056

	DATE SAMPLED	
	1/7/85	5/12/86
<u>Organics</u>		
4,4'-tetrachloride		2.3
chloroform	30.0	6.7
organic compounds, total	6,900	
trichloroethylene		4.2
1,1,1-trichloroethylene		ND
1,1,2-trichloroethylene		ND
<u>Semi-Volatile Organics</u>		
aldrin	ND	ND
chlorophenylmethyl sulfide (CPMS)	ND	ND
chlorophenylmethyl sulfone (CPMSO)	ND	ND
chlorophenylmethyl sulfoxide (CPMSO2)	ND	ND
1,2 dibromo-3-chloropropane (DBCP)	ND	ND
dicyclopentadiene (DCPD)	ND	ND
dieldrin	ND	ND
diisopropylmethyl phosphonate (DIMP)	ND	ND
dithiane	ND	ND
endrin	ND	ND
isodrin	ND	ND
1,4-oxathiane	ND	ND
p,p'DDE	0.47	ND
p,p'DDT	ND	ND
<u>Hydrazines</u>		
1,1-dimethylhydrazine (UDMH)		ND
hydrazine (H)		ND
methylhydrazine (MMH)		40
<u>Anions</u>		
chloride	96,200	67,000
fluoride	6,000	6,000
nitrate	19,000	20,000
sulfate	388,000	410,000
<u>Metals</u>		
calcium	80,800	80,000
potassium	3,580	3,100
arsenic, total	ND	
magnesium	28,500	28,000
mercury, total	ND	
sodium	259,000	260,000
copper		ND
zinc		ND